

Valdez-Cordova Census Area

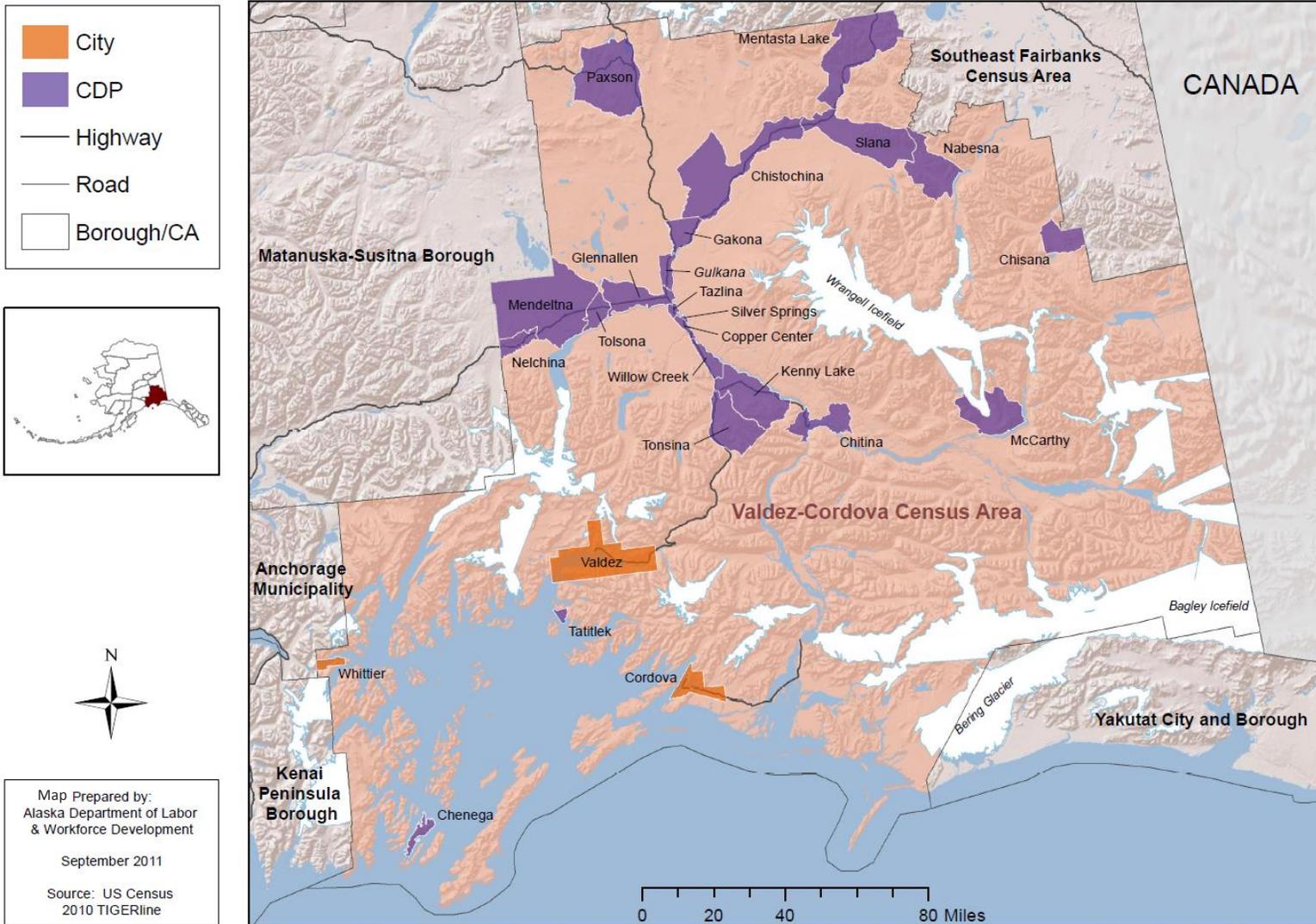


Table of Contents

Valdez-Cordova Census Area Dashboard	III
Valdez-Cordova Census Area Summary	IV-VII
Community.....	IV
Overcrowding.....	IV
Energy	V
Affordability	VI
Community, Regional, and Statewide Housing Characteristics.....	VII
How to Interpret the Profile: Data Sources, Definitions & Clarifications	A-H
Valdez-Cordova Census Area Profile	1-4
Valdez-Cordova Census Area Community Profiles	5-47
Chenega Data Quantity: Low	5
Chistochina Data Quantity: Medium	6
Chitina Data Quantity: Low	8
Copper Center Data Quantity: High	9
Cordova Data Quantity: High	13
Gakona Data Quantity: Medium	17
Glennallen Data Quantity: High	19
Gulkana Data Quantity: Medium	23
Kenny Lake Data Quantity: Medium	25
McCarthy Data Quantity: Medium	27

Mendeltna	Data Quantity: Low	29
Mentasta Lake	Data Quantity: Medium	30
Nelchina	Data Quantity: Low	32
Paxson	Data Quantity: Low	33
Silver Springs	Data Quantity: Low	34
Slana	Data Quantity: Medium	35
Tatitlek	Data Quantity: Medium	37
Tazlina	Data Quantity: Medium	39
Tonsina	Data Quantity: Low	41
Valdez	Data Quantity: High	42
Whittier	Data Quantity: Low	46
Willow Creek	Data Quantity: Low	47

Valdez-Cordova Census Area Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2012) population estimate for the Valdez-Cordova Census Area is 9,953—a decrease of 2% from 2000.

Housing Units: There are currently 6,031 housing units in the Valdez-Cordova Census Area. Of these, 3,793 are occupied, 312 are for sale or rent, and the remaining 1,926 are seasonal or otherwise vacant units (Profile Figure C6).

Energy: The average home in the Valdez-Cordova Census Area is 1,855 square feet and uses 140,000 BTUs of energy per square foot annually, 2% more than the statewide average of 137,000 BTUs per square foot per year.

Energy Costs: Using AKWarm estimates, average annual energy cost for homes in the Valdez-Cordova Census Area is \$8,530, which is approximately 3.1 times more than the cost in Anchorage, and 4 times more than the national average (Profile Figure C13).

Energy Programs: Approximately 14% of occupied housing in the Valdez-Cordova Census Area has completed either the Home Energy Rebate, Weatherization, or BEES programs since 2008, compared to 21% statewide (Profile Figure C12).

Housing Quality: Within current housing stock, newer homes have better energy performance. On average, homes built in the 1940s are currently rated at 1-star-plus, compared to a current average rating of 4-stars for houses built after 2000.

Air-tightness: Within current housing stock, newer homes are tighter. On average, homes built in the last decade very nearly meet the 2012 BEES standard of 4 air-changes per hour at 50 pascals (ACH50). In contrast, homes built in the 1950s are 3 times leakier than those built since 2000 (Profile Figure C7).

Ventilation: An estimated 1,868 occupied housing units (or 49%) in the Valdez-Cordova Census Area are relatively air-tight and lack a continuous ventilation system. These houses are at higher risk of moisture and indoor air quality-related issues (Profile Figures C9-C10).

Overcrowding: 6% of occupied units are estimated to be either overcrowded (4%) or severely overcrowded (2%). This is roughly 2 times the national average, and makes the Valdez-Cordova Census Area the 15th most overcrowded census area in the state.

Affordability: On average, approximately 20% of households in the Valdez-Cordova Census Area spend more than 30% of total income on housing costs, which include rent, utilities, and energy costs. Based on average AKWarm estimates, annual energy costs constitute approximately 14% of census median area income for occupied housing.

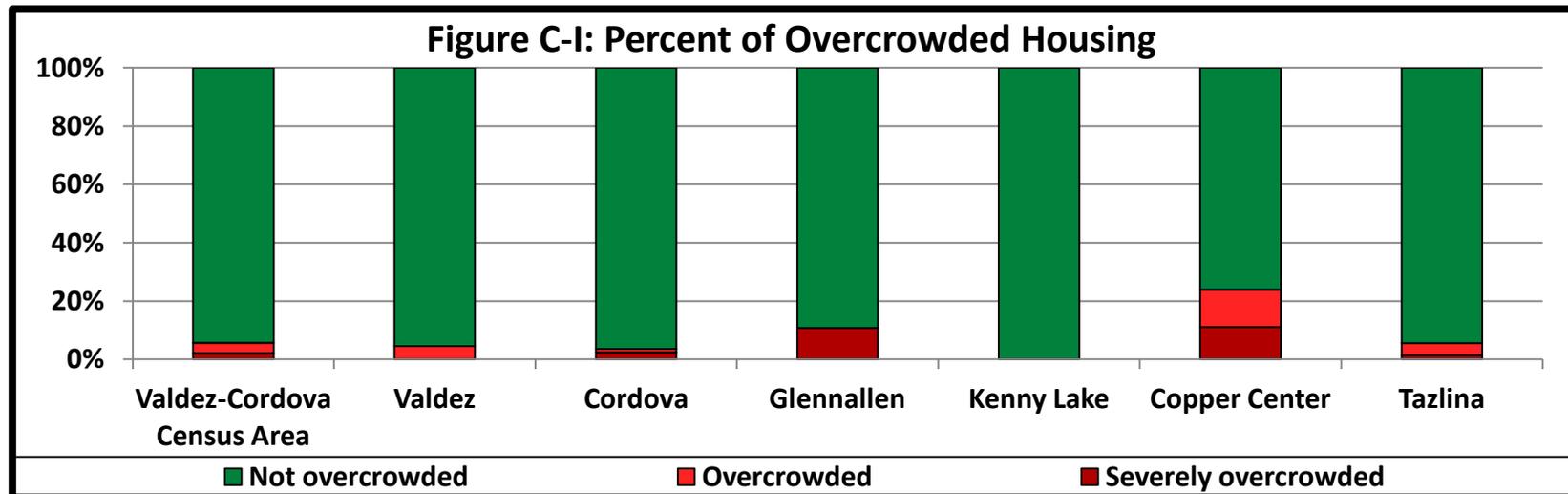
Valdez-Cordova Census Area Summary

Community

The Valdez-Cordova census area sits in the eastern corner of mainland Alaska, at the junction of Southcentral Alaska, Canada, and the Southeast panhandle. Its northern communities are in the Ahtna Native Corporation ANCSA region and the southern, coastal part of the census area lies in the Chugach Native Corporation ANCSA region. The average home size in the census area is 1,855 square feet. The smallest average home size of 1,521 square feet is found in Glennallen and the largest average home size is found in the community of Copper Center, where homes are an average of 2,063 square feet.

Overcrowding

Overcrowding rates vary widely in communities in the Valdez-Cordova census area, from an estimated zero homes in Kenny Lake to an estimated 100% of homes in Nelchina having more than one person per room. The six most populous communities have overcrowding rates ranging from the estimated zero overcrowded homes in Kenny Lake to 24% of homes in Copper Center classified as overcrowded (Figure C-I). Overall, the census area has an overcrowding rate of 6%, roughly twice the national average.



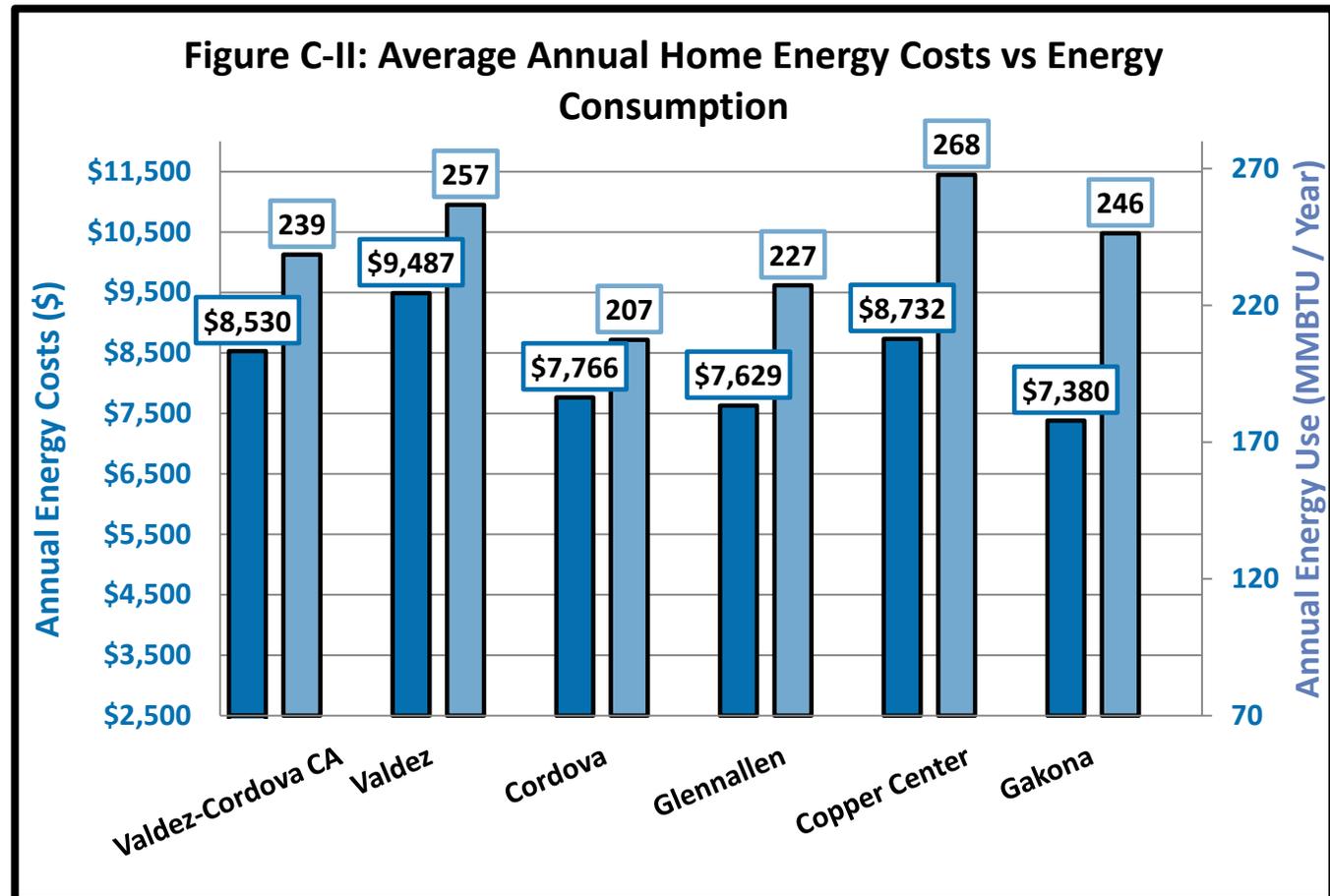
Approximately 5% of housing in Valdez-Cordova census area is available for sale or rent. Rates for available housing have a wide span among communities: an estimated no housing is available for sale or rent in Chistochina and while 54% of available housing is found in Nelchina.

Approximately one third of housing units in the census area (32%) is considered vacant because it is used for seasonal, recreational, or “other” purposes.

Energy

The average annual energy use in the census area is 239 million BTUs per housing unit, the fourth highest of any census area in the state. This results in an average annual energy cost of \$8,530 for the census area as a whole (Figure C-II). The lowest average energy costs are found in Gakona, where households pay an average of \$7,380 per year. Glennallen has the next lowest average annual energy cost at \$7,629 and has the lowest average home heating index in the census area at 8.2 BTUs/ ft²/HDD. The highest average energy cost, and the highest average home heating index is found in the community of Valdez, where households pay on average \$9,487 in energy costs each year for houses with an average heating index of 10.5 BTUs/ft²/HDD.

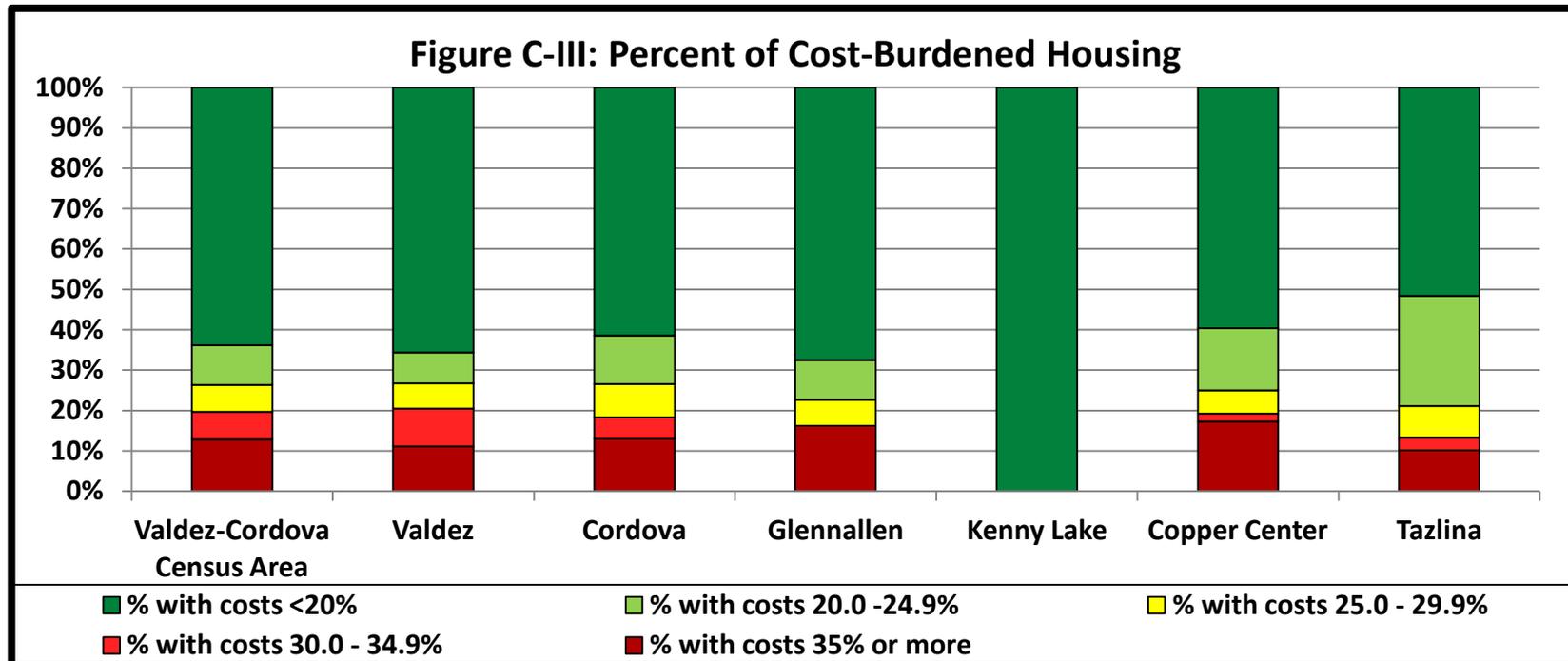
Approximately 15% of housing units in the Valdez-Cordova census area as a whole have completed either the Weatherization, Home Energy Rebate, or BEES programs since 2003. The greatest community participation has occurred in



Tatitlek, where 33% of housing units have completed an energy program, and the lowest participation is found in Whittier, where it is estimated that no homes have completed one of the programs. The six most populous communities have participation rates ranging from 2% to 31%.

Affordability

According to ACS estimates¹, approximately 1 in 5 households in the census area are considered cost-burdened, though percentages widely by community. The six most populous communities have between zero and 21% of households spending more than 30% of total income on housing costs (Figure C-III). The estimated percentage of zero cost-burdened households found in Kenny Lake is the lowest in the census area. In the least affordable community, Paxson, an estimated 100% of households spend over 30% of their income on housing costs. Median household incomes throughout the region vary from a low of \$16,964 in Chitina to a high of \$143,125 in McCarthy. The six most populous communities have median household incomes ranging from \$44,792 to \$79,750.



¹ CCHRC's analysis of ACS energy costs indicate that there are systematic underestimations for rural Alaska, which suggests that ACS-based cost burdened housing estimates are low. See Appendix A, "Analysis of American Community Survey Energy Cost Estimates" for more details.

Community, Regional, and Statewide Housing Characteristics

This census area summary only includes the highlights of housing characteristics at the census area level. Detailed data profile with charts and tables for both the census area and for each of the communities within it follow. The 2014 Alaska Housing Assessment provides a significant amount of data and analysis at statewide, ANCSA region, census area, and community levels. This assessment provides a statewide analysis of housing characteristics, how they compare to national numbers, and the estimated housing needs. Within the 2014 Alaska Housing Assessment, written summaries are available for each individual ANCSA region and census area, and data profiles are available for each community and census area characterizing the housing stock from the perspective of community, overcrowding, energy and affordability. These different tiers of information and analysis allow researchers, housing authorities, policymakers and others to generate answers to specific questions. For a detailed discussion of estimating housing need and comparison of methods to previous Housing Assessments, see Appendix B, "Statewide Need Assessment" of the 2014 Alaska Housing Assessment.

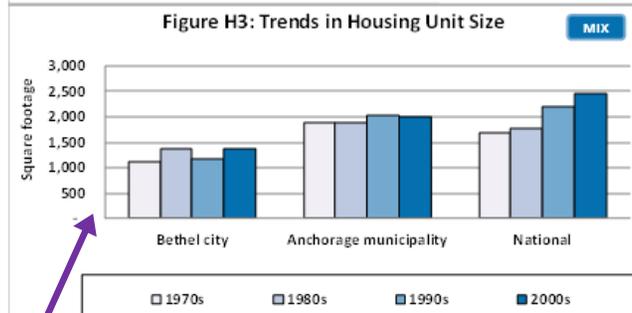
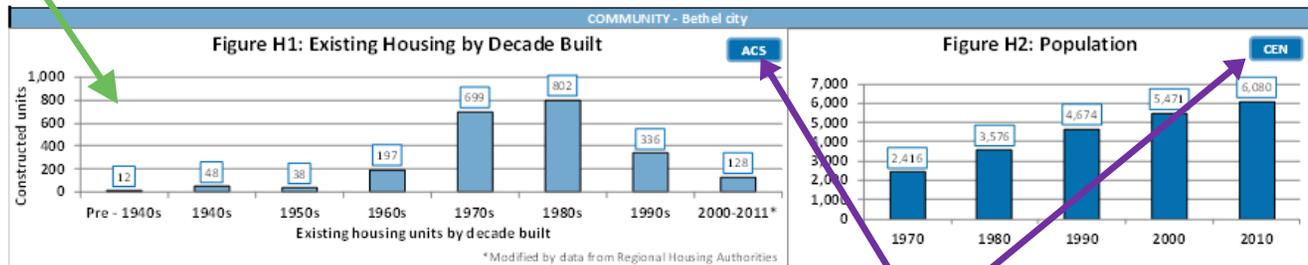
How to Interpret the Profile: Data Sources, Definitions & Clarifications

1

This graph show the breakdown of *current* housing stock by the decade in which the housing units were built. It does *not* show trends over time.

The Alaska Building Energy Efficiency Standard (BEES) was established by AHFC for the State of Alaska to promote the construction of energy efficient buildings. The standards for specific building components are divided into four climate zones, from Zone 6 in Southeast AK to Zone 9 on the North Slope.

Community Profile for:	Bethel city	ANCSA Region	Calista
Regional Housing Authority:	AVCP Regional Housing Authority	BEES Climate Zone (Heating Degree Days)	Zone 8 (13,334 HDD)



Data Source Key:

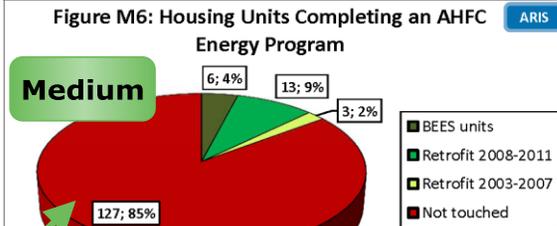
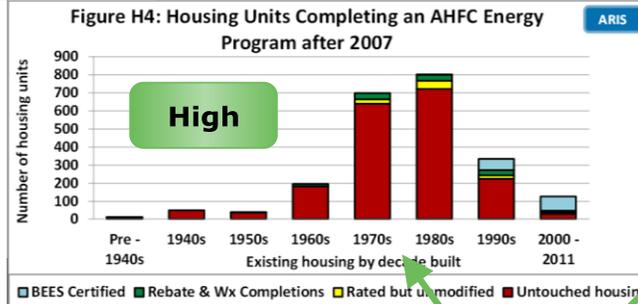
- 2011 American Community Survey 5 year estimates (ACS) **ACS**
- Alaska Retrofit Information System energy audits **ARIS**
- 2010 Decennial Census **CEN**
- Mixed data source; see individual graphs for details. **MIX**

Data Sources: National trends come from the 2009 Residential Energy Consumption Statistics published by the U.S. Energy Information Administration. Anchorage and census area data come from the Alaska Retrofit Information System.

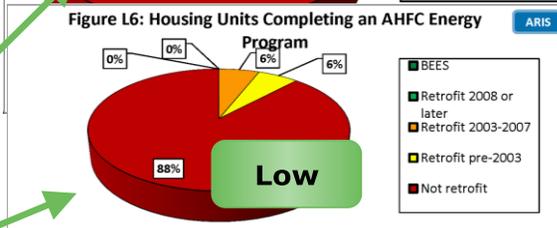
How to Interpret the Profile: Data Sources, Definitions & Clarifications

1

Energy program activity within communities with high, medium and low amounts of ARIS data available. (See p.7 of "How to Interpret" for detail on data levels).



Communities - AHFC Energy Program Activity
High Data - Reported by decade built for the housing units.
Medium Data - Reported by percent of total housing units touched.
Low Data - Have few or no post-2008 Weatherization/Rebate completions or BEES certifications in the ARIS database.



- PCE = Power Cost Equalization
- Average Annual Energy Cost with PCE: The cost to the household after it has been lowered by the PCE subsidy.
- Without PCE: The actual energy cost, including the amount paid by the State for PCE.

American Community Survey (ACS) Data:
Complete Plumbing: Includes hot & cold running water, a flush toilet, and a bathtub or shower within the home.
Complete Kitchen: Includes a sink with a faucet, a stove/range, and a refrigerator.

Houses Lacking Complete Plumbing or Kitchen Facilities	# Households	% Households
Lack complete plumbing	3	10%
Lack complete kitchen	0	0%

Estimated Total Community Space Heating Fuel Use by Type		
Fuel Oil	20,816	(gallons)
Nat Gas	-	(ccf)
Electricity	15,459	(kWh)
Wood	3	(cords)
Propane	-	(gallons)
Coal	-	(tons)

Avg Annual Energy Cost with PCE	\$5,265
Avg Annual Energy Cost without PCE	\$6,643

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$5.16
Electricity with PCE (\$/kWh)	\$0.03
Electricity cost without PCE (\$/kWh)	\$0.27

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	17
2003-2007	-
1990-2002	10

Housing Stock Estimates	
All Housing	Nu
All Occupied Housing	
All Housing	
Vacant housing for Sale or Rent	

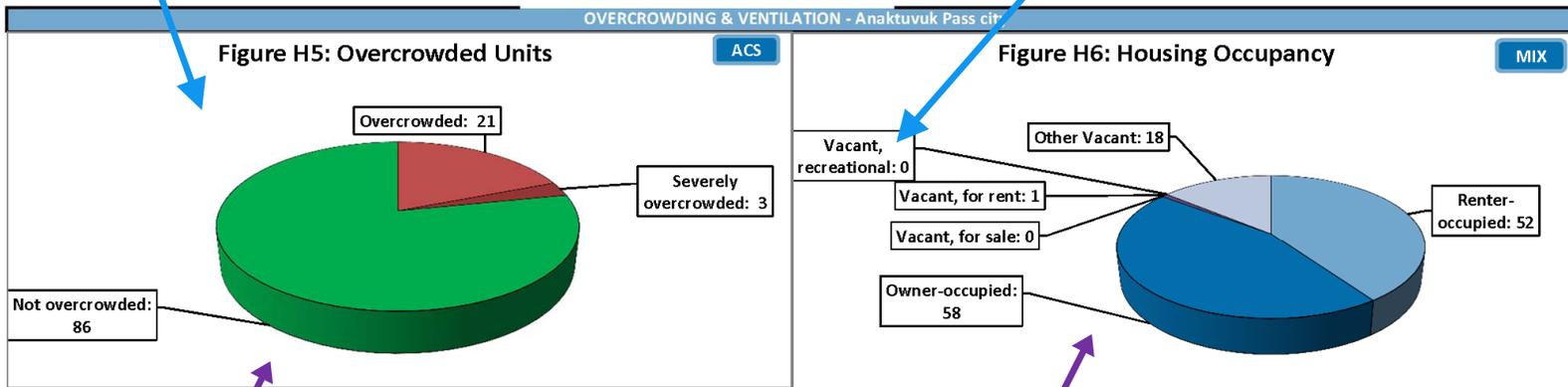
Units weatherized before 2008 are eligible to participate in the program again. (Data source: Alaska Housing Finance Corporation).

How to Interpret the Profile: Data Sources, Definitions & Clarifications

2

Overcrowded: Housing units with more than 1 person per room
Severely Overcrowded: Housing units with more than 1.5 people per room.
 "Rooms" include bedrooms, living rooms, dining rooms, kitchens, and other finished, separated spaces, but not including bathrooms, porches, balconies, foyers, halls, or unfinished basements.

Recreational: For seasonal, recreational, or occasional use.



Data Source:
 2011 American Community Survey 5-year estimates

Data Sources: The number of owner-occupied, renter-occupied, and total vacant units are taken from the 2011 ACS 5-year estimates. Data for vacancy type, only available from the decennial Census, were derived by taking the decennial census ratios by vacancy type and applying them to the total number of vacant units.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

2

Heat Recovery: Continuous mechanical ventilation with heat recovery operated with automatic controls.

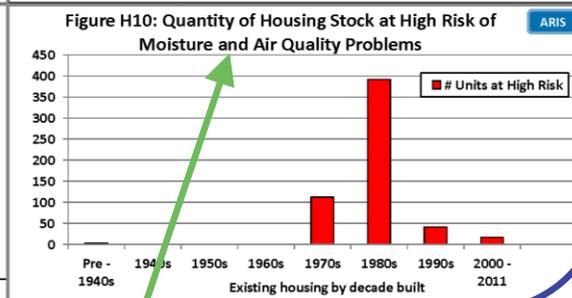
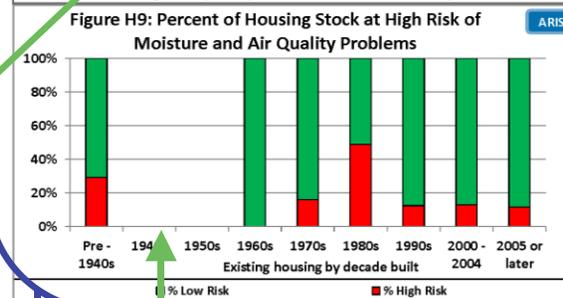
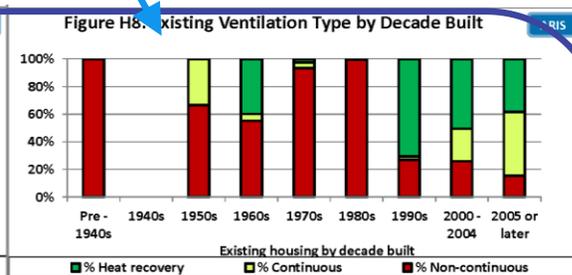
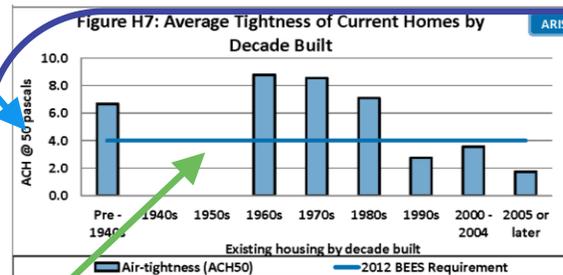
Continuous: Mechanical ventilation without heat recovery operated with automatic controls.

Non-Continuous ventilation: Includes homes with range and/or bath fans not operated using automatic controls.

ACH50: The results of a blower door test to measure building air leakage. Smaller numbers indicate tighter buildings. Tighter buildings lose less heated air to the outside and thus use less energy for space heating.

The 2012 Building Energy Efficiency Standard (BEES) for air-tightness is for reference only, as it was implemented after the majority of homes in Alaska were built.

Data Source:
Alaska Retrofit Information System



Decades with no bar lack sufficient data for reporting. They should not be considered zero quantities.

High Risk of Moisture and Air Quality Problems: Note that moisture or poor indoor air quality have not been physically measured; these houses are considered "at-risk" because they are relatively air tight (less than 0.5 estimated natural air changes per hour) and do not have a continuous ventilation system.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

Rating stars and points are based on AHFC's AkWarm energy rating system.

Average annual energy cost:
Includes all end uses. Costs are estimated using January 2013 energy prices, and include reductions from the PCE program.

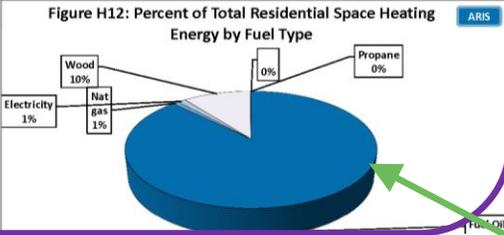
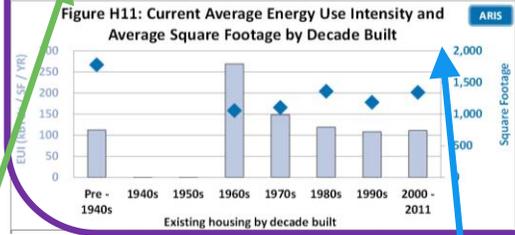
Space Heating, DHW, Appliances:
Estimated annual energy for the end uses of: Space Heating, Domestic Hot Water, and all other energy including lights, appliances, and electronics.

ECI: Energy Cost Index,
the amount of money spent on energy per year divided by square footage.

Home Heating Index:
The energy used per square foot per year divided by the area's heating degree days.

The number of AkWarm records from each decade built that were used to calculate the averages reported.

Current Residential Units by Year Built	Number of Records	Avg Energy Rating	Avg Energy Rating Points	Avg Sq. Feet	Avg Annual Energy Cost (with PCE)	Avg Annual Energy Use (million BTUs)	Avg Ann Energy by Use (million Btus)			Avg. EUI (kBtu/SqFt)	Avg. ECI (\$ / SqFt)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	419	3-star	70.7	1,237	\$ 8,065	160	102	27	26	132	\$ 6.97	6.5
Pre- 1940	7	3-star	68.3	1,779	\$ 11,107	199	145	21	33	113	\$ 6.66	6.4
1940-49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950-59	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960-69	15	2-star	52.3	1,056	\$ 11,087	287	225	35	27	269	\$ 10.60	16.0
1970-79	71	2-star plus	64.5	1,106	\$ 7,961	153	105	21	25	149	\$ 8.09	7.8
1980-89	113	3-star plus	74.7	1,361	\$ 8,239	157	100	30	26	119	\$ 6.40	5.8
1990-99	111	4-star	79.9	1,187	\$ 6,395	122	57	21	20	108	\$ 5.58	4.7
2000-2004	71	3-star plus	77.5	1,388	\$ 8,435	143	80	35	27	118	\$ 7.24	5.2
2005 or later	28	5-star	91.9	1,233	\$ 4,504	92	39	28	25	79	\$ 3.82	2.5



Data Source:
AkWarm ratings from AHFC's Alaska Retrofit Information System (ARIS).

Average energy characteristics of the *current* housing stock by decade built (high data communities) or by pre-/post-retrofit and new construction categories (medium data communities).

Energy Use Intensity (EUI) is the total amount of energy used per year per square foot of floor space.

This is the community's breakdown by fuel type of the energy (BTUs) used for home space heating. It is not the percent of housing using a given fuel in primary space heating devices. Because wood burning devices are inefficient, they may use a significant portion of total energy even if no homes in a community use wood as a primary fuel.

How to Interpret the Profile: Data Sources, Definitions & Clarifications 3

Average building envelope characteristics of the *current* housing stock by decade built (high data communities) or by pre-/post-retrofit and new construction categories (medium data communities).

ACH50: The results of a blower door test to measure building leakiness. Smaller numbers indicate tighter buildings.

R-value: the capacity to resist heat flow. The higher the value, the better the insulator.

U-value: the conductance to heat flow. The lower the value, the better the insulator.

Data Sources: AkWarm ratings from AHFC's Alaska Retrofit Information System (ARIS).

Current Bethel city Housing Envelope Characteristics By Decade Built

Current Residential Units by Year Built	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	419	6.4	23	17	7	30	NR	2	0.36	0.27	0.54
Pre- 1940	7	6.7	26	21	NR	30	NR	NR	0.30	NR	0.40
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	15	8.8	16	14	NR	21	NR	NR	0.44	NR	1.65
1970- 79	71	8.5	20	15	NR	29	NR	NR	0.39	NR	0.57
1980- 89	113	7.1	29	17	NR	32	NR	NR	0.30	NR	0.44
1990- 99	111	2.7	56	31	NR	50	NR	NR	0.19	0.12	0.29
2000- 2004	71	3.6	13	21	NR	36	NR	NR	0.27	0.23	0.40
2005 or later	28	1.7	41	22	NR	41	NR	NR	0.20	NR	0.31
BEES 2009 - Climate Zone 8		7.0	38	30	15	38	15	15	0.22	0.22	0.22
BEES 2012 - Climate Zone 8		4.0	48	30	15	38	15	15	0.22	0.22	0.22

The number of AkWarm records from each decade built that were used to calculate the averages reported.

"NR" is used when there are insufficient records to protect the confidentiality of the occupants.

Color Coding--

- Green:** the average value meets or exceeds the 2012 BEES requirement.
- Yellow:** value is 75-99% of the 2012 BEES requirement.
- Red:** value is less than 75% of the 2012 BEES requirement.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

4

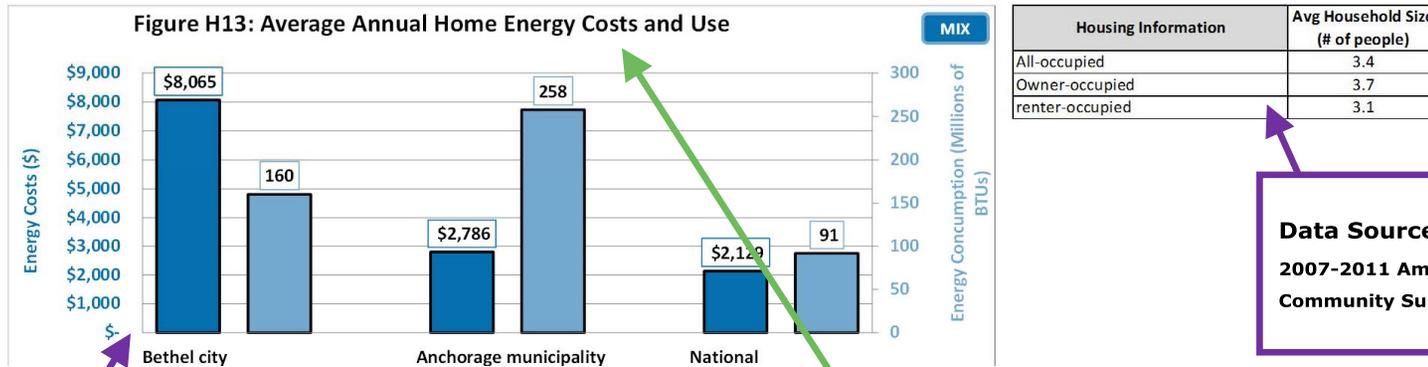
Communities are categorized in this report by the amount of ARIS data available, and reporting is more extensive for locations with more data. Data quantities are defined as--

High: ARIS records exist for housing units built in 7 of the 9 date ranges use in this report, and there are either more than 50 records or records totaling 20 percent or more of the total number of housing units.

Medium: There are three or more ARIS records. Data are presented for an "overall" group if there are "As Is" ARIS records totaling at least 10% of the community's occupied housing units.

Low: There are fewer than three ARIS records for the location.

Community Template - Data Quantity: High



Data Source:
2007-2011 American
Community Survey

Data Sources: Census Area and Anchorage data come from AFHC's Alaska Retrofit Information System. National figures come from the U.S. Energy Information Administration's 2009 Residential Energy Consumption Statistics (RECS) for "cold"/"very cold" climate regions.

Average annual home energy costs and usage estimates are for all end uses, including space heating, domestic hot water, lighting and appliances. Costs are estimated using January 2013 energy prices and include reductions from the PCE program.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

4

Data Source:
2007-2011
American
Community
Survey.

"Value" is determined by responses to the ACS question: "How much do you think this house and lot, apartment, or mobile home (and lot, if owned) would sell for if it were for sale?"

Household income includes all earnings from salaries, stocks, gifts, public assistance, etc.

Data Source: Median income comes from 2007-2011 ACS estimates; energy costs come from AHFC's Alaska Retrofit Information System (ARIS).

Owner-occupied House with Mortgage, Median Value
\$226,800
Owner-occupied House without a Mortgage, Median Value
\$119,600

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 91,302
Renter-occupied	\$ 70,170
Owner-occupied	\$ 107,908
w/ mortgage	\$ 111,167
w/o mortgage	\$ 70,400

Median Household Expenses		
	Monthly	Annual
All-occupied	\$ 1,369	\$ 16,428
Gross rent	\$ 1,201	\$ 14,412
Owner-occupied	\$ 1,610	\$ 19,320
Housing units w/ mortgage	\$ 1,854	\$ 22,248
Housing units w/out a mortgage	\$ 680	\$ 8,160
Avg % of Median Income Spent on Energy	8.8%	

Figure H14: Affordability - Housing Costs as a Percent of Income

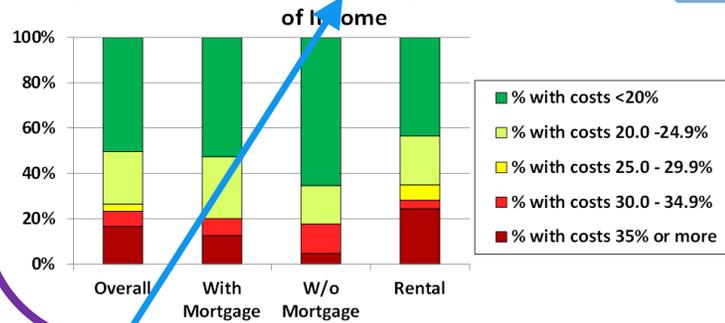
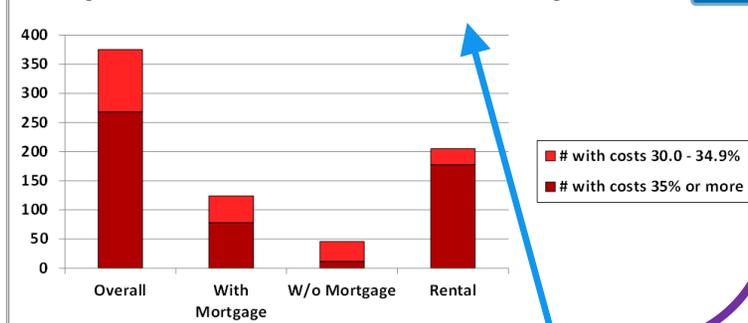


Figure H15: Number of Cost-Burdened Housing Units



Rental housing costs: Contract rent, fuels, utilities.

Owner housing costs: Mortgage payments, property taxes, insurance, fuels, utilities, condo fees.

Households are considered "cost burdened" if they spend 30% or more of total household income on housing costs. Households spending more than this amount on housing costs may have difficulty affording basic necessities such as food, transportation, and medical care.

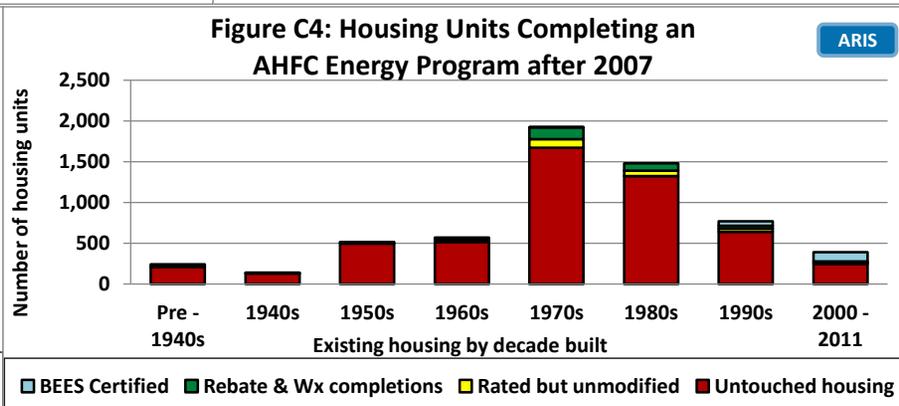
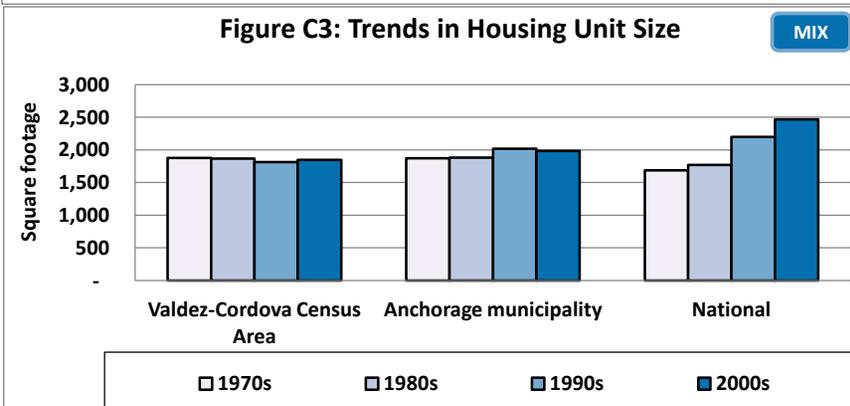
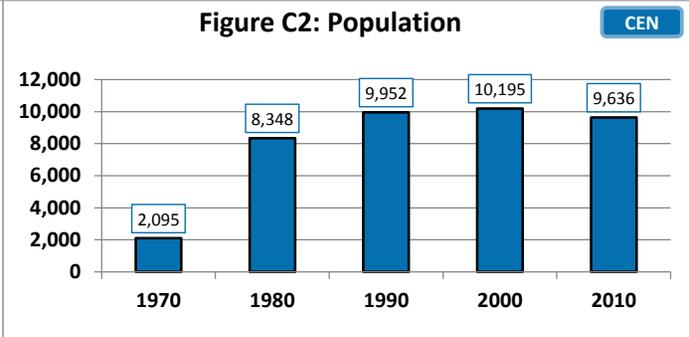
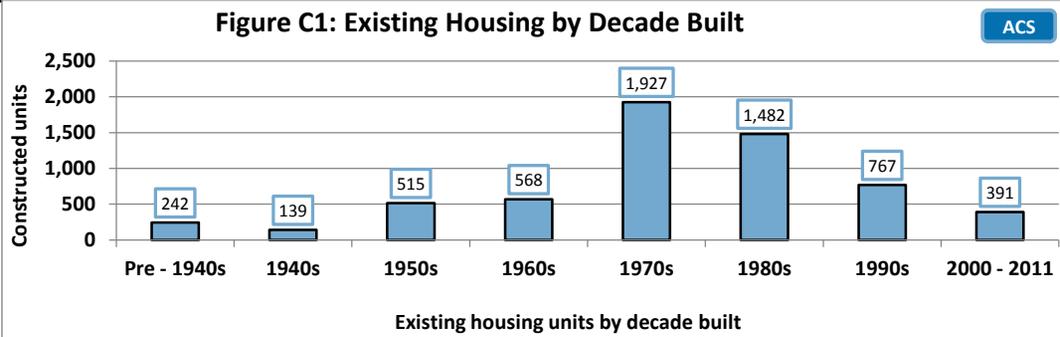
Census Area Profile for: Valdez-Cordova Census Area

ANCSA Region: Valdez-Cordova Census Area

Regional Housing Authority: North Pacific Rim Housing Authority

BEES Climate Zone (Heating Degree Day Range): Zone 7 (9,000 - 12,600 HDD)

COMMUNITY - Valdez-Cordova Census Area



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	338	9%
Lack complete kitchen	224	6%

Avg Annual Energy Cost with PCE	\$8,530
Avg Annual Energy Cost without PCE	\$8,835

Weatherization Retrofits (funding increased 2008)	
Date Range	Units
2008 - 2011	128
2003 - 2007	40
1990 - 2002	332

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	4,130,858	(gallons)
Natural Gas	-	(ccf)
Electricity	3,050,015	(kWh)
Wood	6,065	(cords)
Propane	202,006	(gallons)
Coal	66	(tons)

Housing Need Indicators	Number of Units	% Occupied Housing
Overcrowded	215	6%
Housing cost burdened	704	19%
1 Star Homes	598	16%

Housing Stock Estimates	Number of Units
All Housing	6,031
All Occupied Housing	3,793
All Vacant housing	2,238
Vacant Housing for Sale or Rent	312

OVERCROWDING & VENTILATION - Valdez-Cordova Census Area

Figure C5: Overcrowded Units

ACS

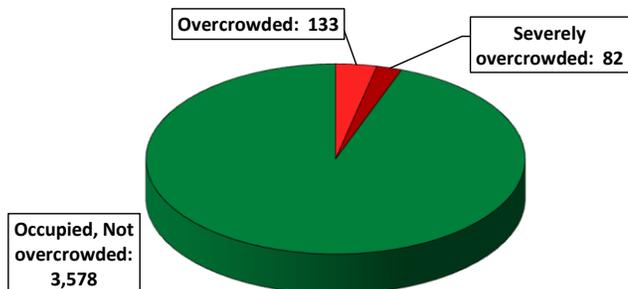


Figure C6: Housing Occupancy

MIX

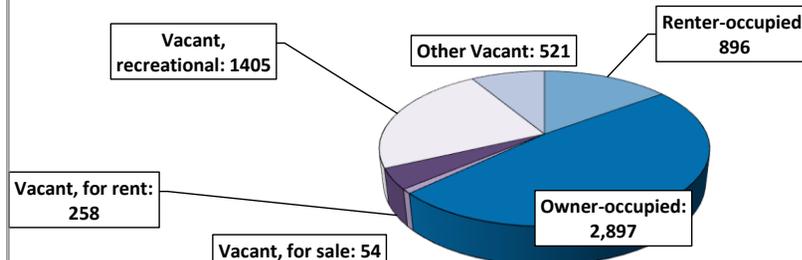


Figure C7: Average Air-Tightness of Current Homes by Decade Built

ARIS

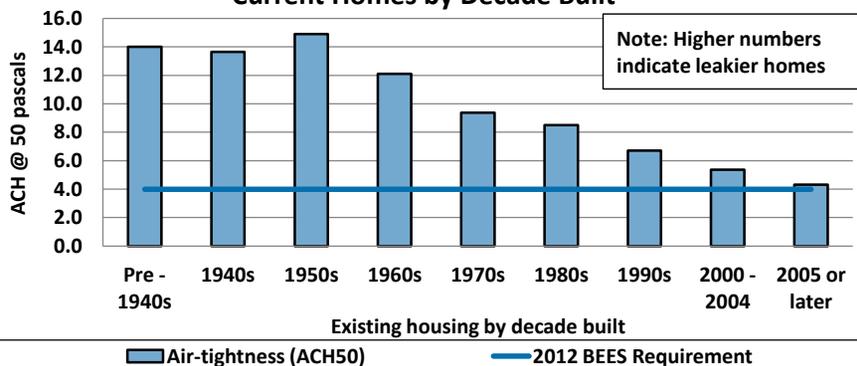


Figure C8: Existing Ventilation Type by Decade Built

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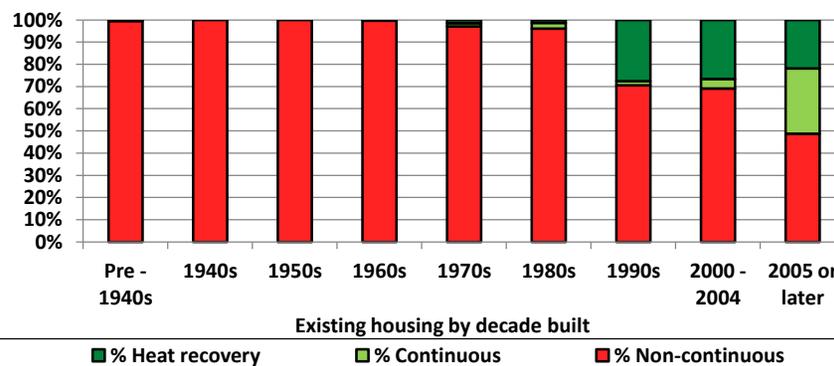


Figure C9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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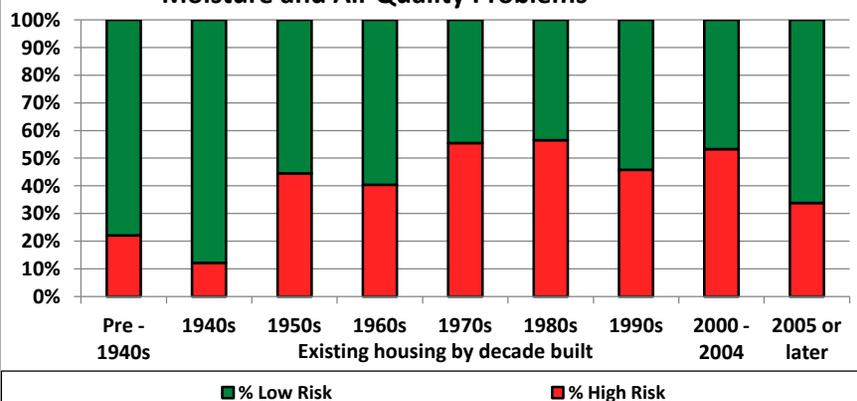
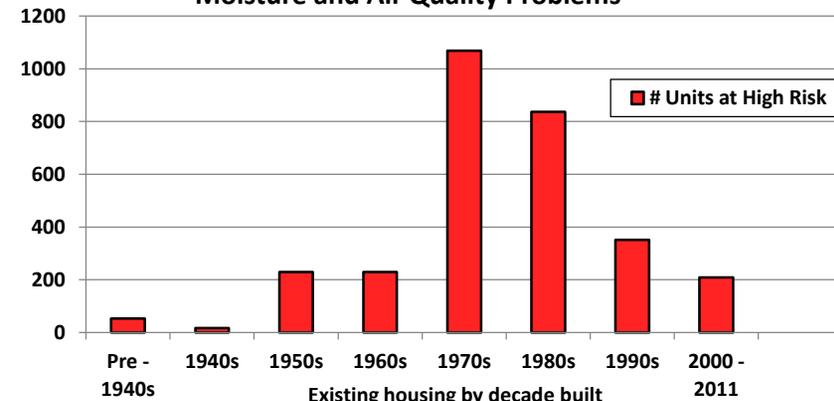


Figure C10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Valdez-Cordova Census Area												
Current Valdez-Cordova Census Area Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	# of AkWarm Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost (with PCE)	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtUs / SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	1,037	2-star plus	65.0	1,855	\$8,530	239	175	30	31	140	\$5.01	10.2
Pre- 1940	52	2-star	52.5	1,725	\$8,862	241	182	29	30	145	\$5.37	12.3
1940- 49	14	1-star plus	43.1	1,807	\$8,711	235	182	24	28	143	\$5.22	12.5
1950- 59	25	2-star	53.4	2,010	\$9,355	251	189	30	32	151	\$5.69	11.7
1960- 69	74	2-star	59.0	1,766	\$9,425	267	208	29	30	164	\$5.70	12.8
1970- 79	353	2-star plus	63.2	1,880	\$9,038	253	190	31	32	142	\$5.19	10.6
1980- 89	213	3-star	68.2	1,866	\$8,439	244	184	30	31	143	\$4.92	10.0
1990- 99	153	3-star plus	75.5	1,814	\$7,060	197	128	27	28	124	\$4.23	8.0
2000- 2004	86	4-star	79.5	1,847	\$6,808	174	112	30	32	106	\$4.28	6.2
2005 or later	67	4-star	82.5	1,699	\$6,130	156	97	30	29	100	\$3.90	6.1

Figure C11: Current Average Energy Use Intensity and Average Square Footage by Decade Built

ARIS

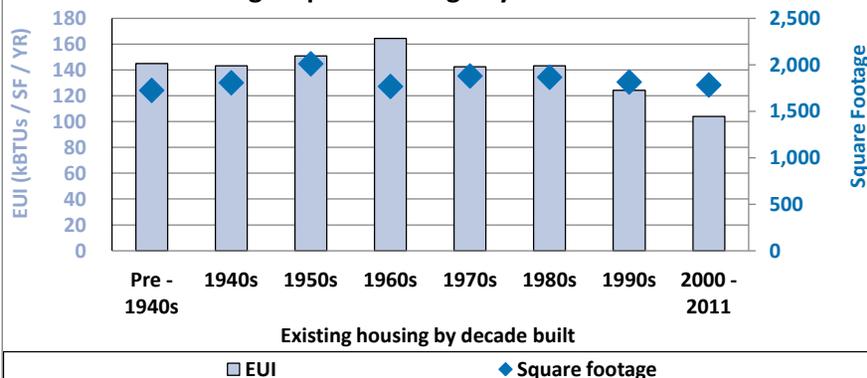
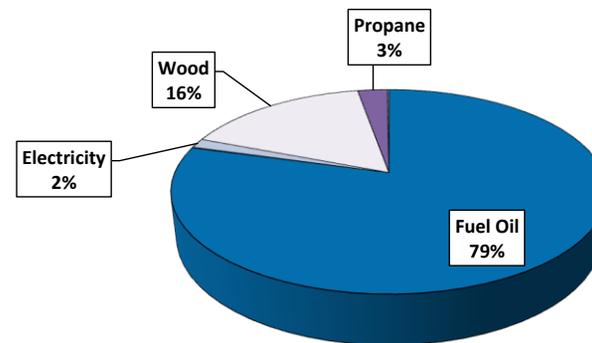


Figure C12: Percent of Total Residential Space Heating Energy by Fuel Type

ARIS

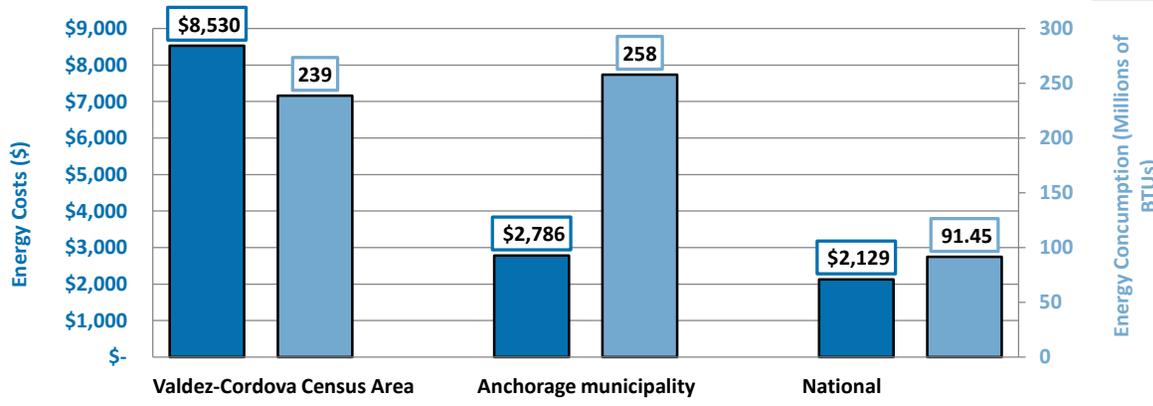


Current Valdez-Cordova Census Area Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	# of AkWarm Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	1,037	9.3	21	12	4	18	3	3	0.36	0.29	0.54
Pre- 1940	52	14.0	12	9	3	13	3	3	0.41	0.35	0.59
1940- 49	14	13.6	10	9	3	10	NR	NR	0.30	NR	0.56
1950- 59	25	14.9	16	10	3	16	2	3	0.47	NR	0.57
1960- 69	74	12.1	18	10	3	19	3	3	0.41	0.36	0.58
1970- 79	353	9.4	22	11	5	18	3	3	0.38	0.31	0.58
1980- 89	213	8.5	25	14	4	21	3	3	0.33	0.34	0.51
1990- 99	153	6.7	25	16	7	19	3	3	0.28	0.20	0.42
2000- 2004	86	5.4	32	16	5	26	4	3	0.30	0.20	0.39
2005 or later	67	4.3	39	15	8	31	4	3	0.27	0.16	0.36

BEES 2009 - Climate Zone 7	7.0	38	21	15	38	15	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7	4.0	43	25	15	38	15	15	15	0.30	0.30	0.30

AFFORDABILITY - Valdez-Cordova Census Area

Figure C13: Average Annual Home Energy Cost and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.4
Owner-occupied	2.6
Renter-occupied	2.0

Median Value of Owner-occupied House with Mortgage
\$178,600

Median Value of Owner-occupied House without a Mortgage
\$121,100

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 62,238
Renter-occupied	\$ 37,181
Owner-occupied	\$ 80,313
w/ mortgage	\$ 100,840
w/o mortgage	\$ 53,571

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 800	\$ 9,600
Gross rent	\$ 809	\$ 9,708
Owner-occupied	\$ 792	\$ 9,504
Housing units w/ mortgage	\$ 1,438	\$ 17,256
Housing units w/out a mortgage	\$ 441	\$ 5,292

Avg % of Median Income Spent on Energy **13.7%**

Figure C14: Affordability - Housing Costs as a Percent of Income

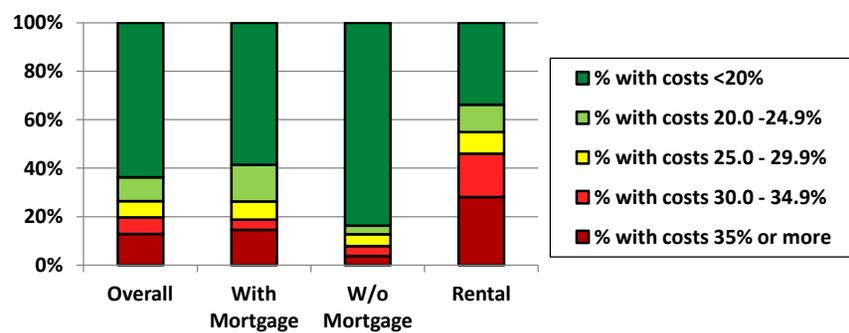
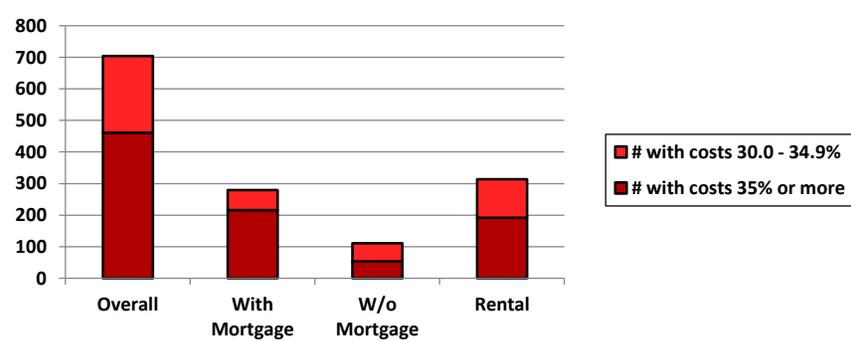


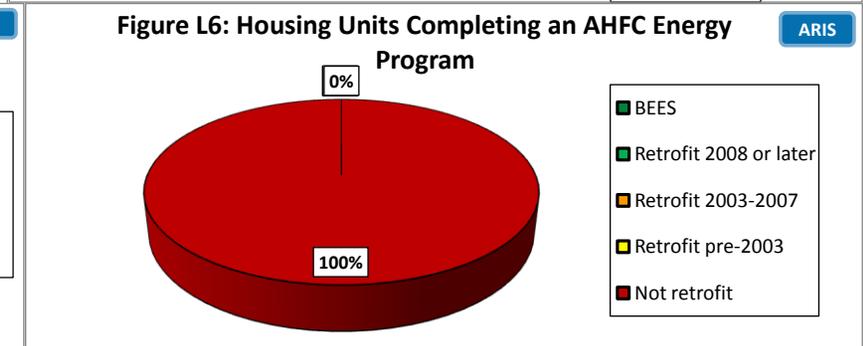
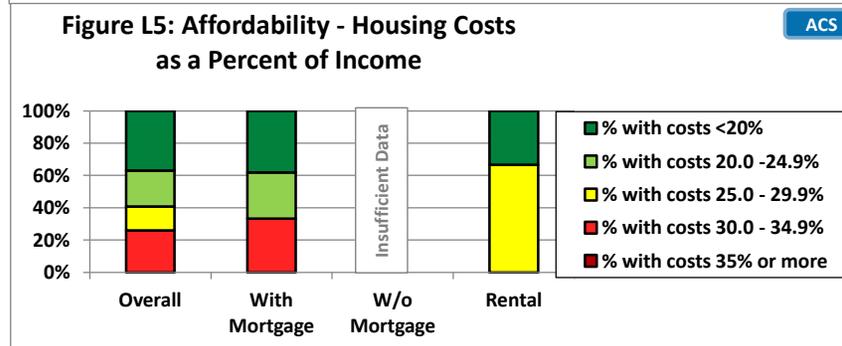
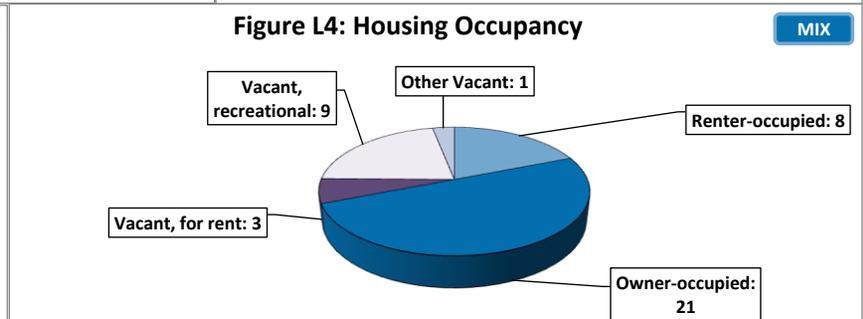
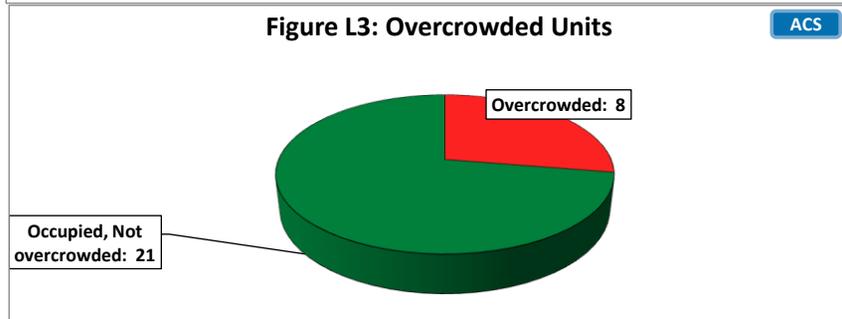
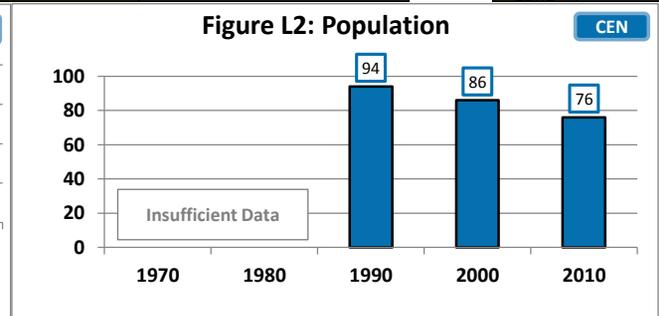
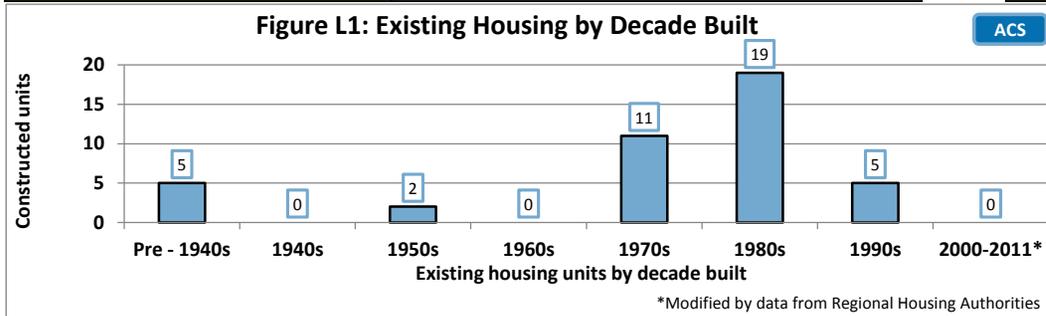
Figure C15: Number of Cost-Burdened Housing Units



Community Profile for: Chenege CDP

ANCSA Region: Chugach Alaska Corp

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value
\$217,900

Owner-occupied House without a Mortgage, Median Value
NR

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 6.00
Electricity with PCE (\$/kWh)	\$ 0.14
Electricity without PCE (\$/kWh)	\$ 0.44

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 49,107
Renter-occupied	\$ 37,500
Owner-occupied	\$ 49,107
w/ mortgage	\$ 49,107
w/o mortgage	NR

Housing Stock Estimates	Number of Units
All Housing	42
All Occupied Housing	29
All Vacant housing	13

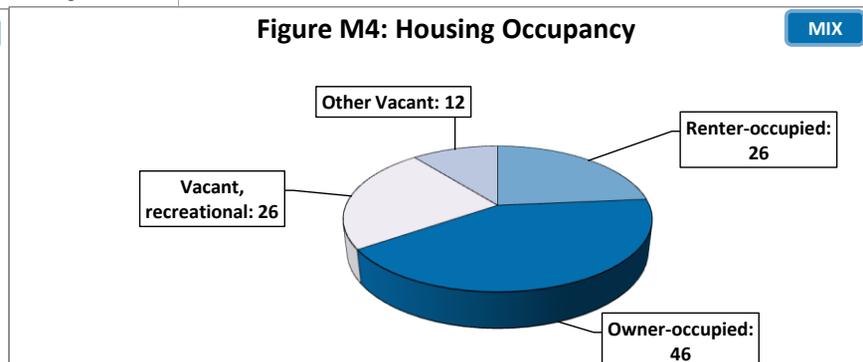
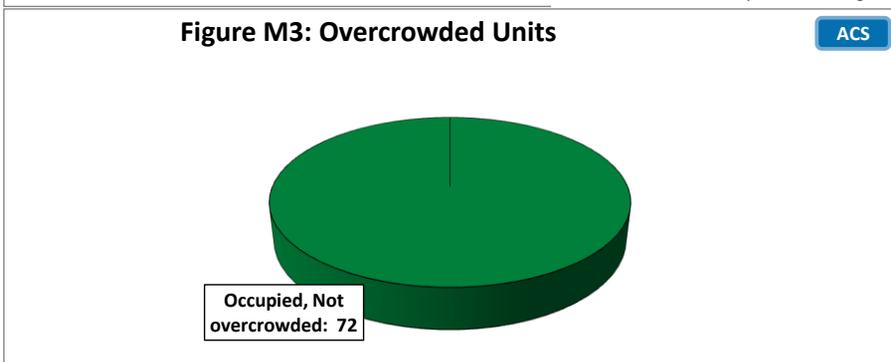
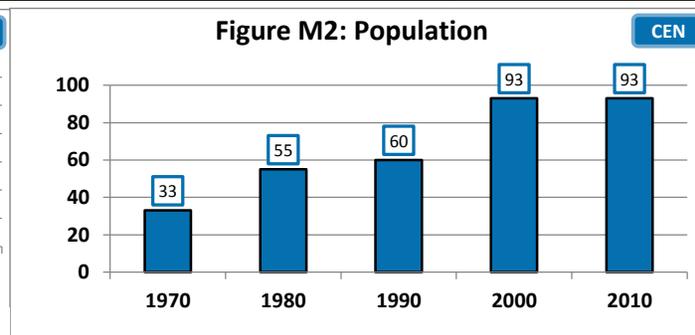
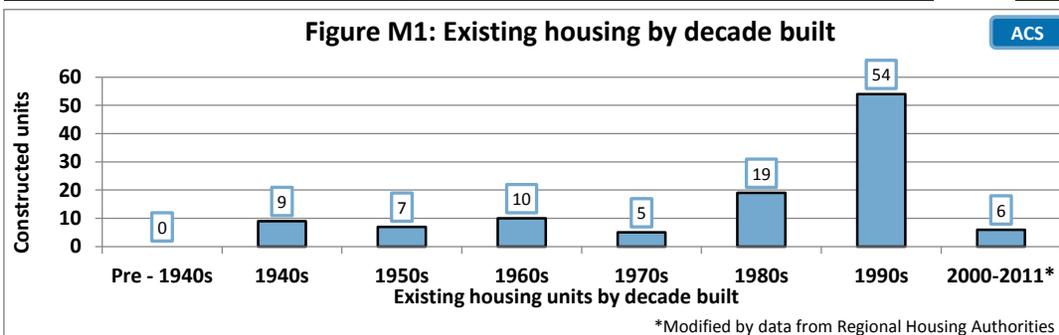
Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 788	\$ 9,456
Gross rent	\$ 288	\$ 3,456
Owner-occupied	\$ 1,054	\$ 12,648
Housing units w/ mortgage	\$ 1,054	\$ 12,648
Housing units w/out a mortgage	NR	NR

Community Profile for: Chistochina CDP

ANCSA Region: Ahtna Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (13,534 HDD)



Chistochina CDP Housing Energy Characteristics

Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	9	2-star plus	66.2	1,730	\$ 8,991	256	162	\$5.79	9.3	44%
Retrofit units	3	4-star	79.6	1,923	\$ 7,850	167	123	\$5.69	6.2	33%
New construction	2	NR	NR	NR	NR	NR	NR	NR	NR	NR

Chistochina CDP Housing Envelope Characteristics

Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	9	10.9	23	13	7	23	2	3	0.42	NR	0.50
Retrofit units	3	5.1	32	14	6	NR	NR	NR	0.54	NR	0.48
New construction	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

MIX

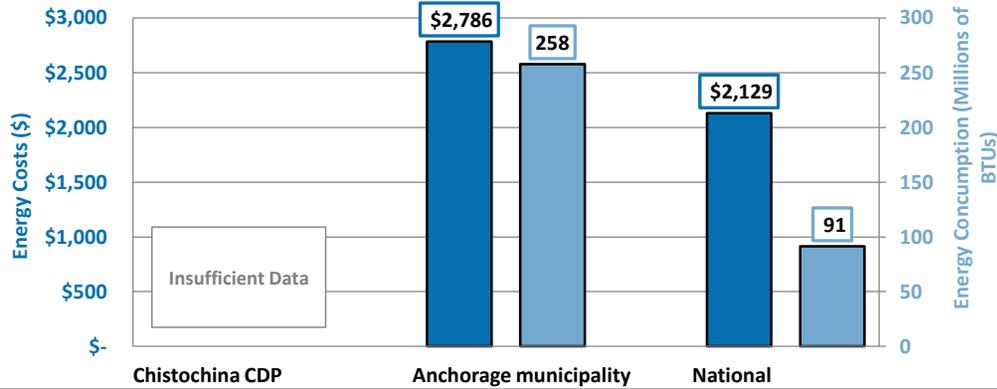
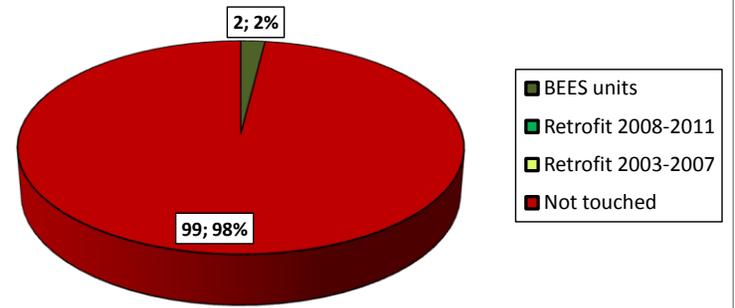


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Chistochina CDP

Owner occupied House with Mortgage, Median Value
NR
Owner-occupied House without a Mortgage, Median Value
\$275,000

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 24,783
Renter-occupied	\$ 47,833
Owner-occupied	\$ 24,565
w/ mortgage	NR
w/o mortgage	\$ 24,565

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 431	\$ 5,172
Gross rent	\$ 757	\$ 9,084
Owner-occupied	\$ 350	\$ 4,200
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	\$ 325	\$ 3,900

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.06
Electricity with PCE (\$/kWh)	\$ 0.20
Electricity without PCE (\$/kWh)	\$ 0.70

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$11,707

Housing Stock Estimates	Number of Units
All Housing	110
All Occupied Housing	72
All Vacant housing	38
Vacant Housing for Sale/Rent	0

Avg % Income on Energy	47.2%
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Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

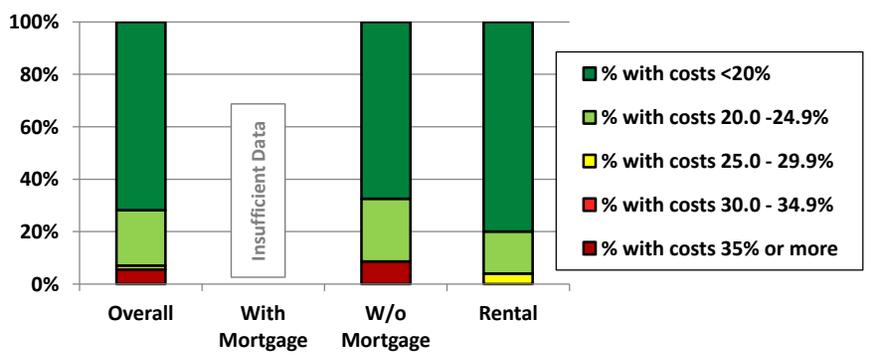
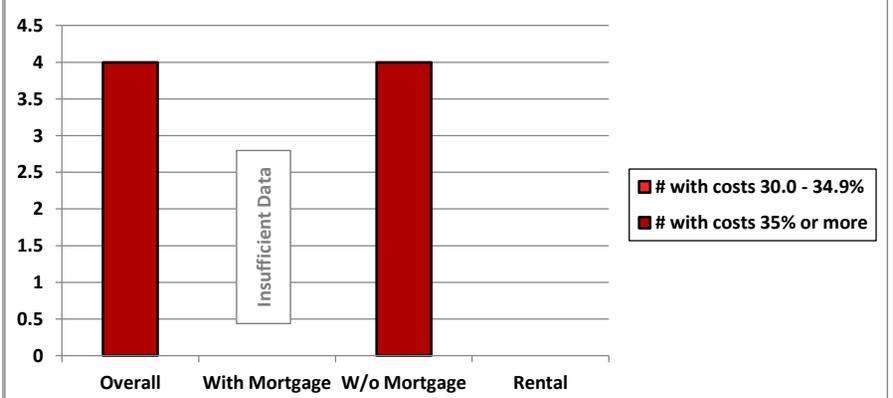


Figure M8: Number of Cost-Burdened Housing Units

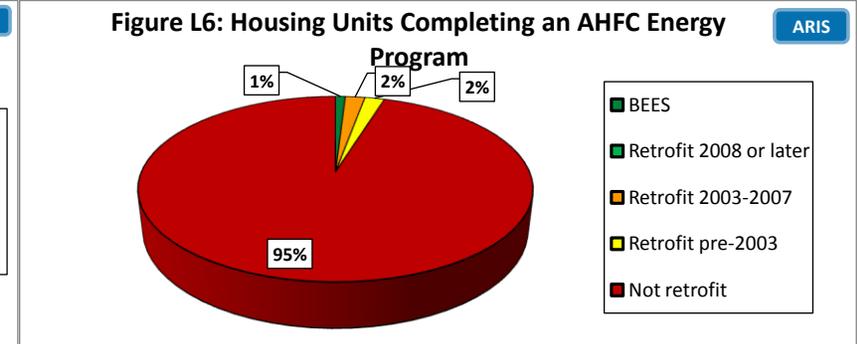
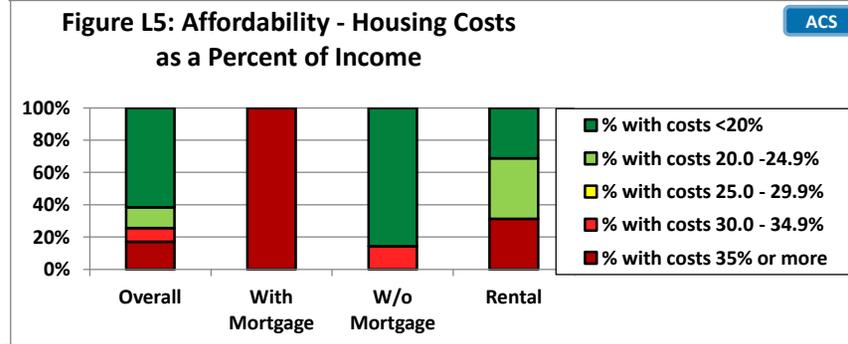
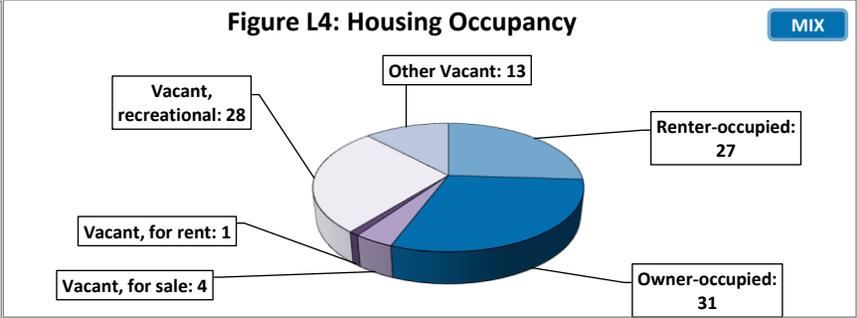
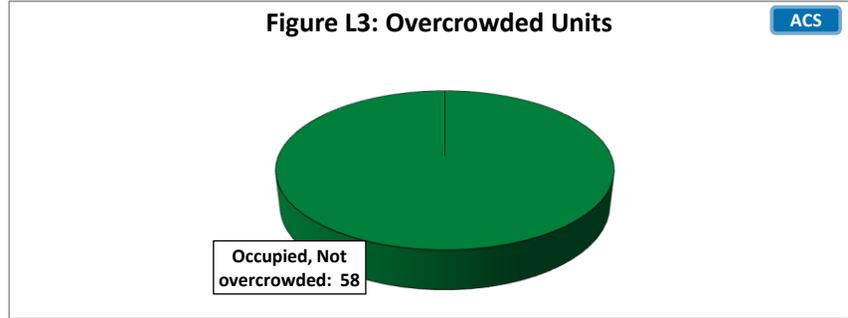
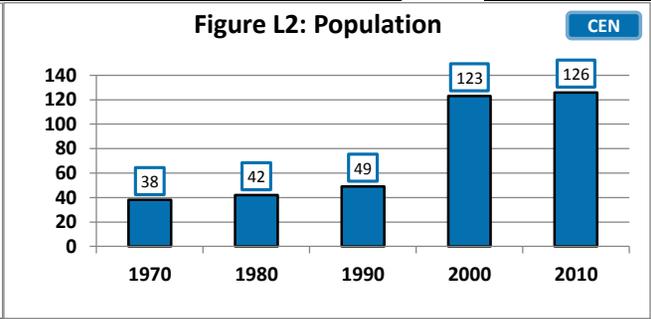
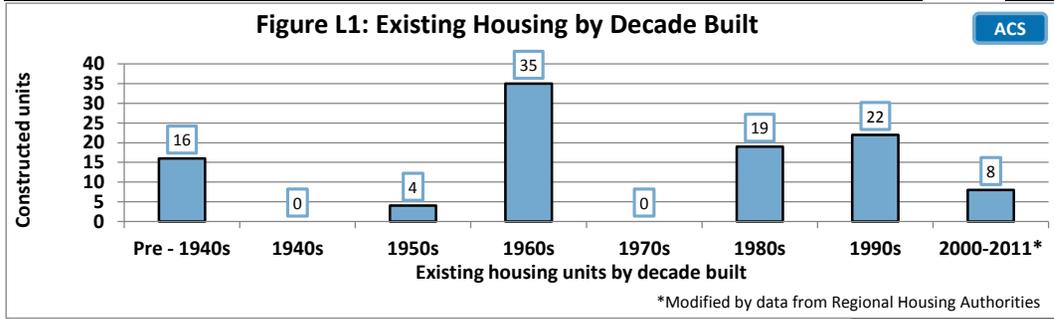
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Community Profile for: Chitina CDP

ANCSA Region: Ahtna Inc

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value
\$162,500

Owner-occupied House without a Mortgage, Median Value
\$37,500

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 3.99
Electricity with PCE (\$/kWh)	\$ 0.21
Electricity without PCE (\$/kWh)	\$ 0.60

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 16,964
Renter-occupied	\$ 14,135
Owner-occupied	\$ 29,375
w/ mortgage	NR
w/o mortgage	\$ 22,500

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 288	\$ 3,456
Gross rent	\$ 706	\$ 8,472
Owner-occupied	\$ 138	\$ 1,656
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	\$ 100	\$ 1,200

Housing Stock Estimates	
	Number of Units
All Housing	104
All Occupied Housing	58
All Vacant housing	46

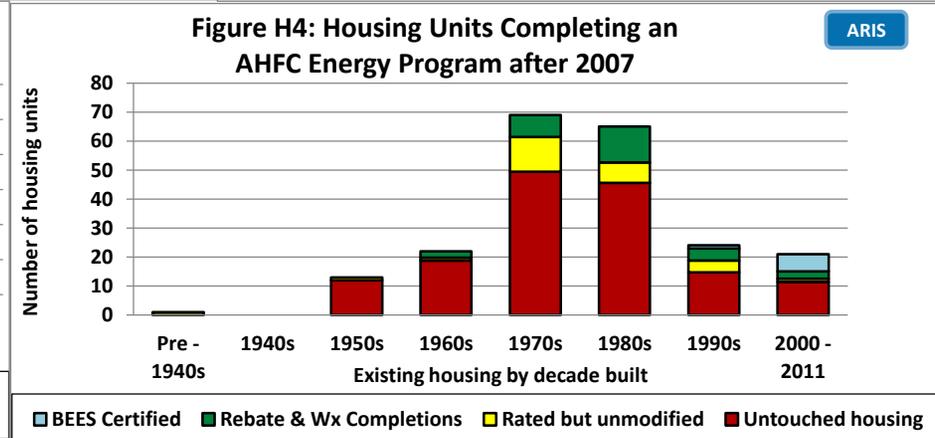
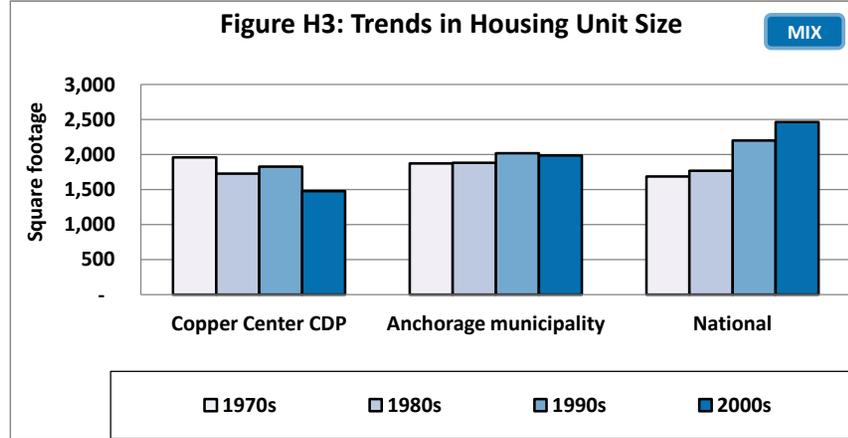
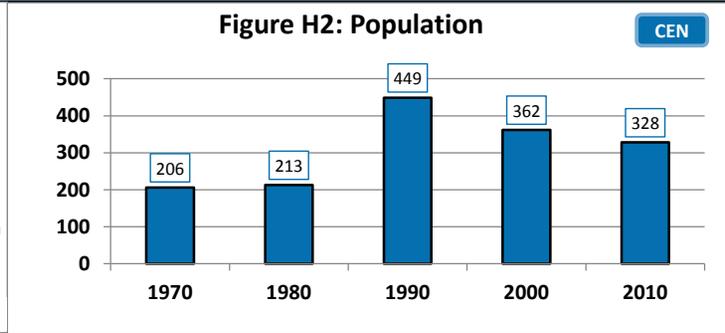
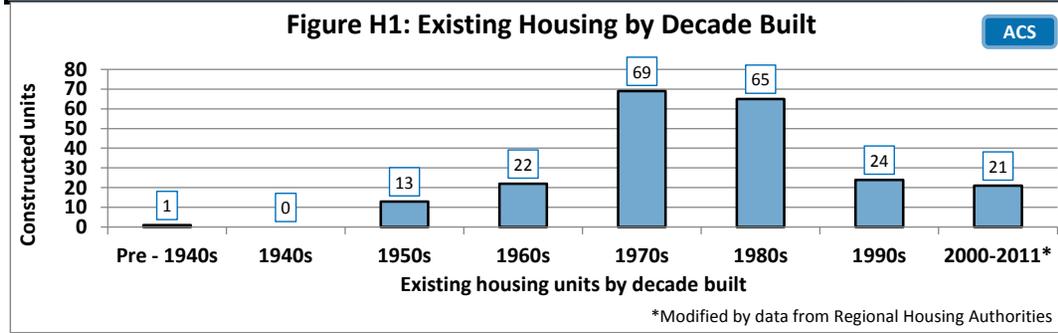
Community Profile for: Copper Center CDP

ANCSA Region: Ahтна Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (14,101 HDD)

COMMUNITY - Copper Center CDP



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	14	12%
Lack complete kitchen	14	12%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$8,732

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	14
2003-2007	9
1990-2002	65

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	120,056	(gallons)
Nat Gas	-	(ccf)
Electricity	95,258	(kWh)
Wood	466	(cords)
Propane	1,350	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$4.06
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.30

Housing Stock Estimates	Number of Units
All Housing	214
All Occupied Housing	117
All Vacant housing	97
Vacant Housing for Sale or Rent	6

OVERCROWDING & VENTILATION - Copper Center CDP

Figure H5: Overcrowded Units

ACS

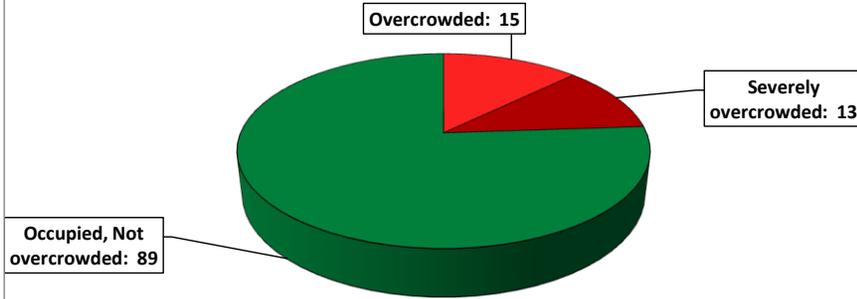


Figure H6: Housing Occupancy

MIX

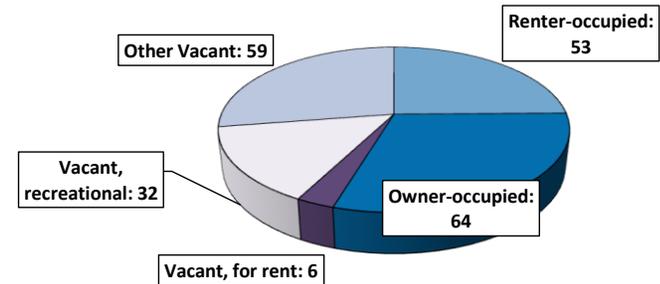


Figure H7: Average Air-Tightness of Current Homes by Decade Built

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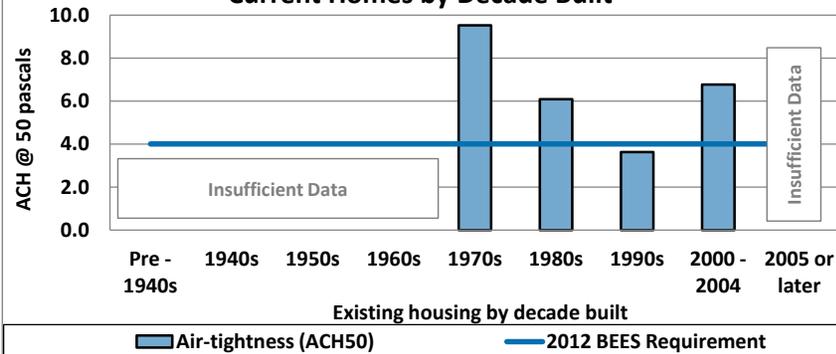


Figure H8: Existing Ventilation Type by Decade Built

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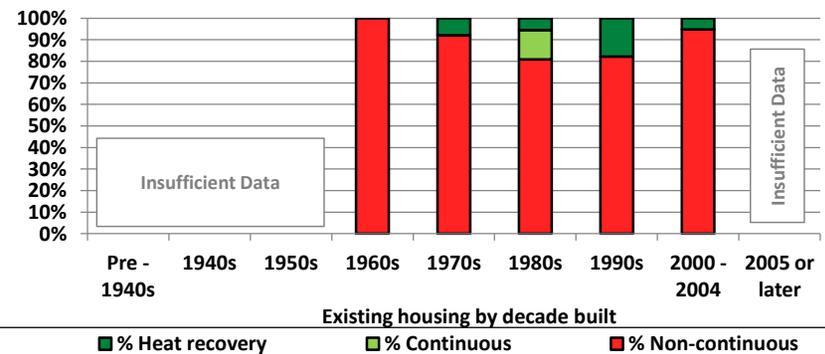


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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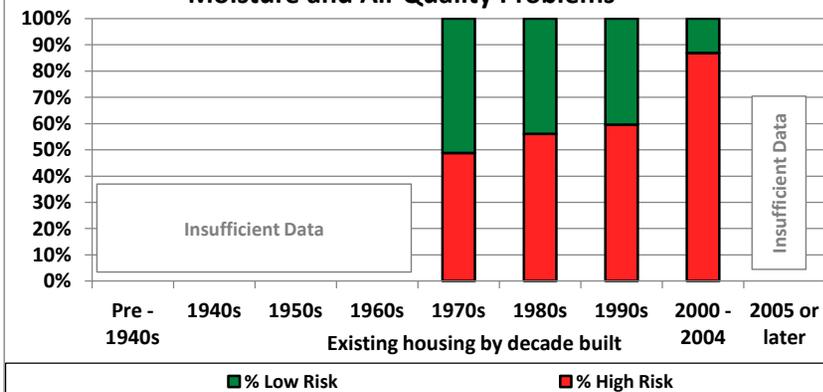
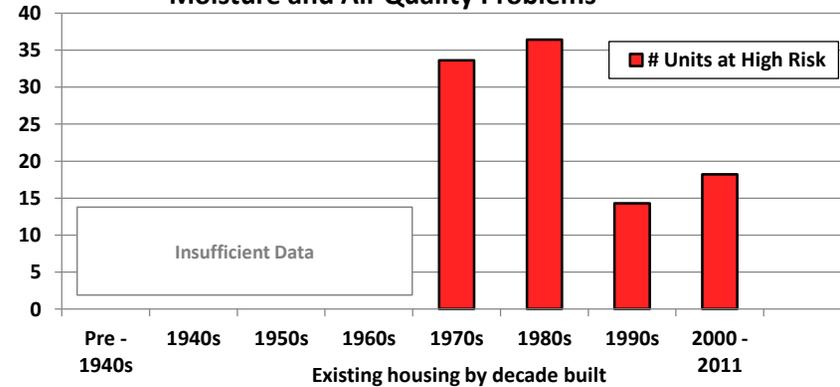


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Copper Center CDP												
Current Copper Center CDP Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtus/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	78	2-star plus	67.5	2,063	\$ 8,732	268	208	26	33	159	\$ 5.08	9.1
Pre- 1940	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	4	2-star	55.1	2,696	NR	341	294	13	34	166	\$ 4.70	10.2
1970- 79	25	2-star plus	61.7	1,958	\$ 9,833	305	248	26	31	173	\$ 5.61	10.1
1980- 89	25	3-star plus	73.0	1,728	\$ 7,449	238	177	27	33	156	\$ 4.72	8.7
1990- 99	12	4-star	78.5	1,830	\$ 7,261	208	144	26	29	124	\$ 4.43	6.5
2000- 2004	6	2-star	55.9	1,475	\$ 7,048	198	153	18	27	239	\$ 7.67	13.8
2005 or later	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Figure H11: Current Average Energy Use Intensity and Average Square Footage by Decade Built

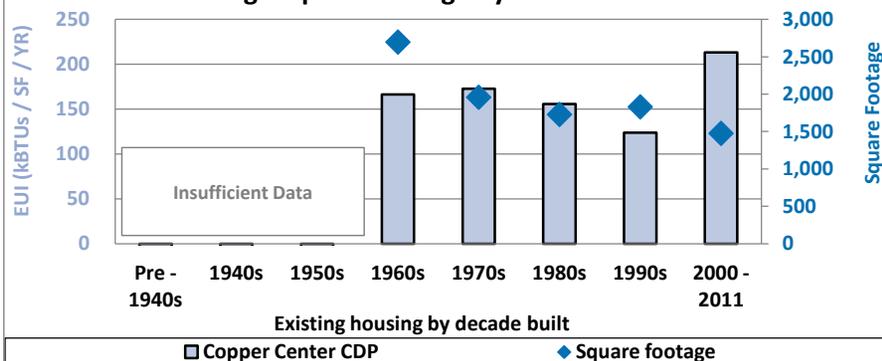
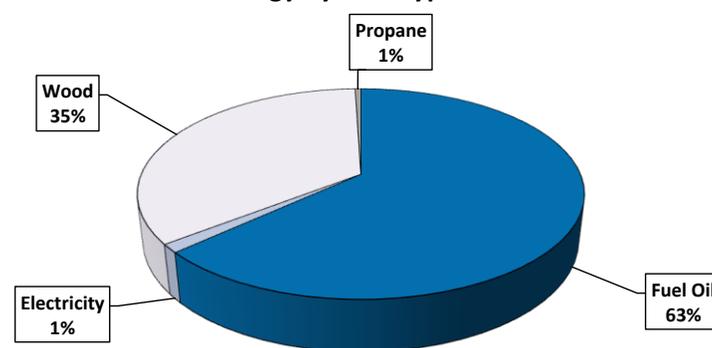


Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type

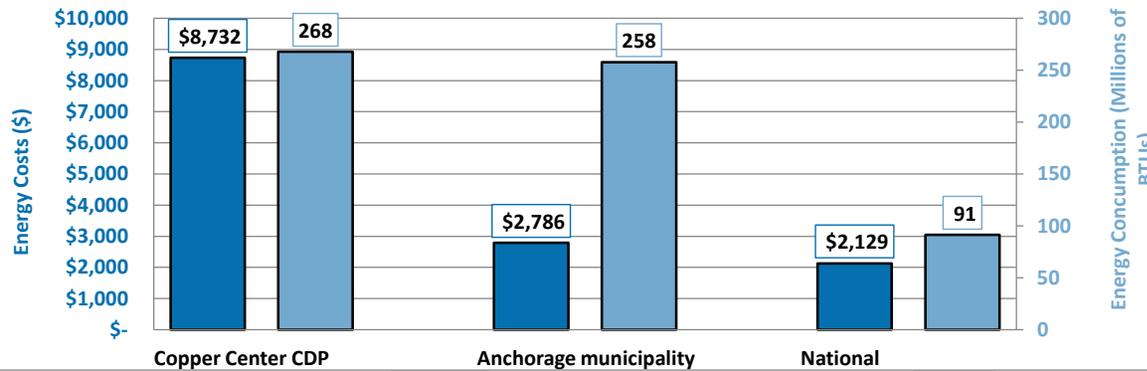


Current Copper Center CDP Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	78	7.0	23	14	8	19	3	3	0.34	0.25	0.52
Pre- 1940	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	4	NR	10	11	NR	NR	NR	NR	0.34	NR	0.61
1970- 79	25	9.5	29	11	8	14	3	2	0.33	0.26	0.58
1980- 89	25	6.1	29	18	12	25	3	3	0.33	NR	0.48
1990- 99	12	3.6	37	19	NR	34	3	NR	0.28	NR	0.43
2000- 2004	6	6.8	18	10	NR	NR	NR	NR	0.39	NR	0.48
2005 or later	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009 - Climate Zone 7	7.0	38	21	15	38	15	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7	4.0	43	25	15	38	15	15	15	0.30	0.30	0.30

AFFORDABILITY - Copper Center CDP

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.9
Owner-occupied	3.2
renter-occupied	2.6

Owner-occupied House with Mortgage, Median Value
\$131,300

Owner-occupied House without a Mortgage, Median Value
\$191,100

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 44,792
Renter-occupied	\$ 33,958
Owner-occupied	\$ 60,625
w/ mortgage	\$ 62,188
w/o mortgage	\$ 38,438

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 600	\$ 7,200
Gross rent	\$ 759	\$ 9,108
Owner-occupied	\$ 500	\$ 6,000
Housing units w/ mortgage	\$ 1,018	\$ 12,216
Housing units w/out a mortgage	\$ 363	\$ 4,356

Avg % of Median Income Spent on Energy	19.5%
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Figure H14: Affordability - Housing Costs as a Percent of Income

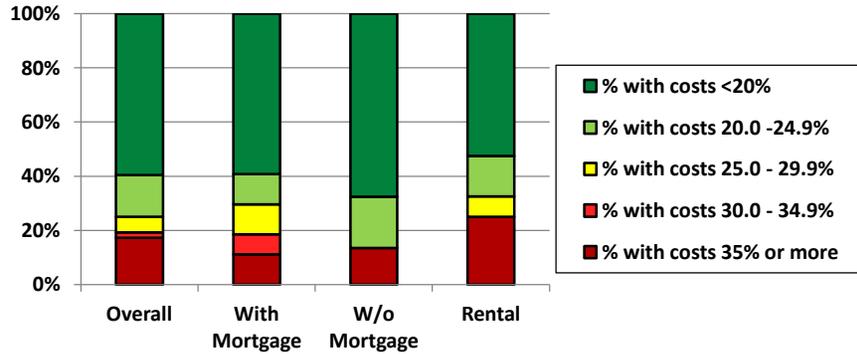
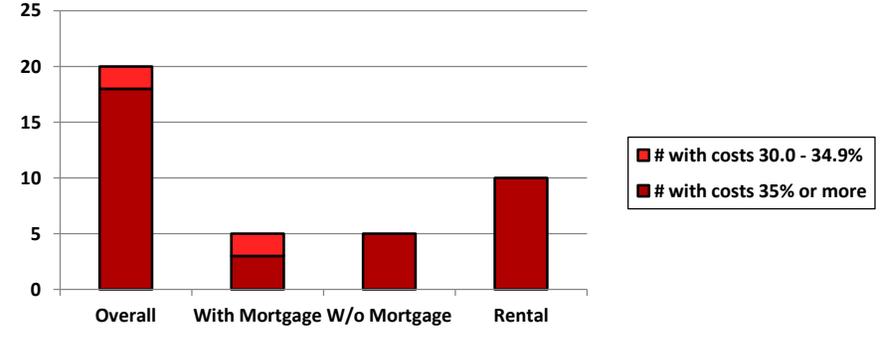


Figure H15: Number of Cost-Burdened Housing Units



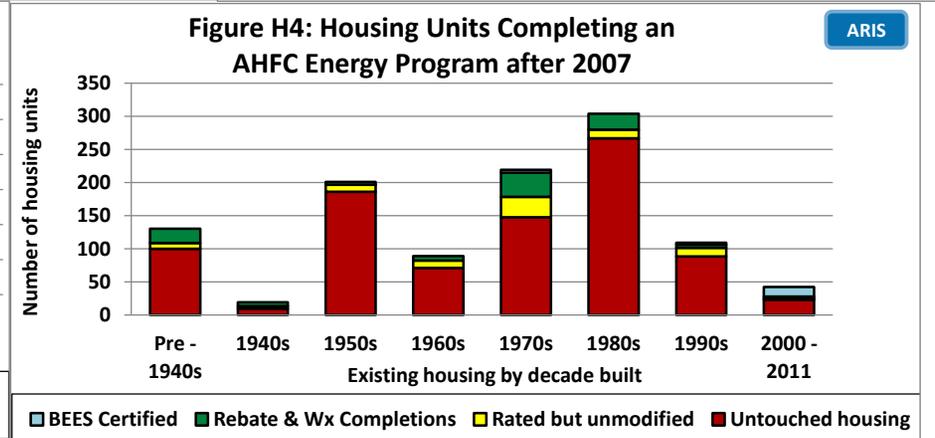
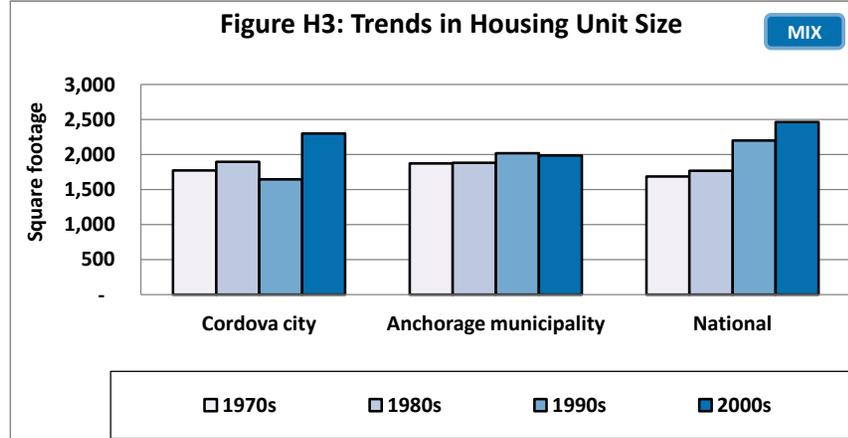
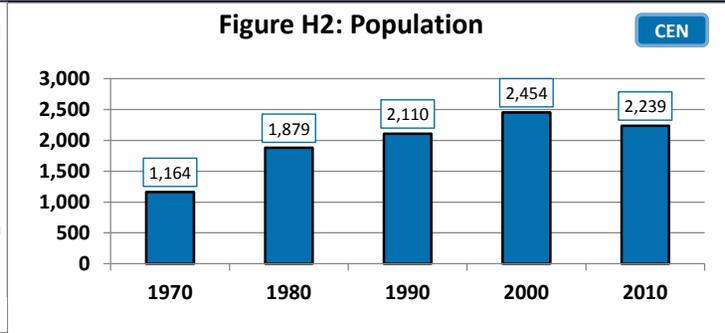
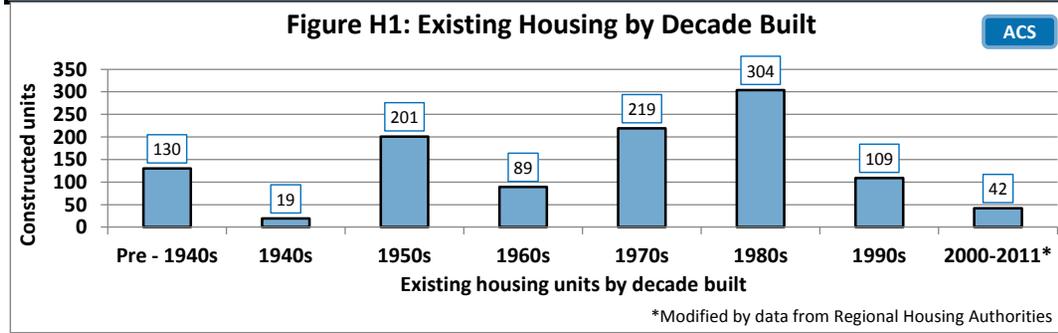
Community Profile for: Cordova city

ANCSA Region: Chugach Alaska Corp

Regional Housing Authority: North Pacific Rim Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (9,004 HDD)

COMMUNITY - Cordova city



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	9	1%
Lack complete kitchen	0	0%

Avg Annual Energy Cost with PCE	\$7,766
Avg Annual Energy Cost without PCE	\$8,412

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	41
2003-2007	10
1990-2002	22

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	897,625	(gallons)
Nat Gas	-	(ccf)
Electricity	462,677	(kWh)
Wood	373	(cords)
Propane	8,590	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$4.63
Electricity with PCE (\$/kWh)	\$0.16
Electricity cost without PCE (\$/kWh)	\$0.27

Housing Stock Estimates	Number of Units
All Housing	1113
All Occupied Housing	832
All Vacant housing	281
Vacant Housing for Sale or Rent	65

OVERCROWDING & VENTILATION - Cordova city

Figure H5: Overcrowded Units

ACS

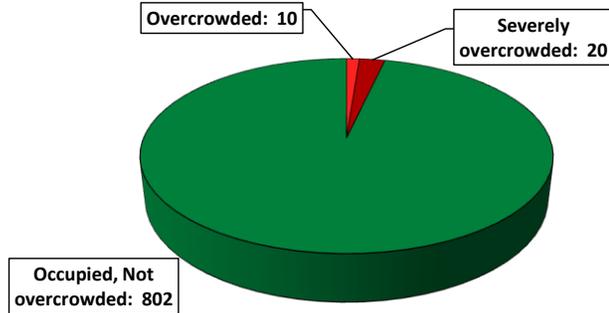


Figure H6: Housing Occupancy

MIX

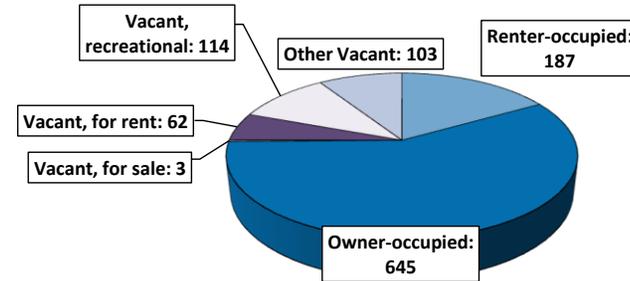


Figure H7: Average Air-Tightness of Current Homes by Decade Built

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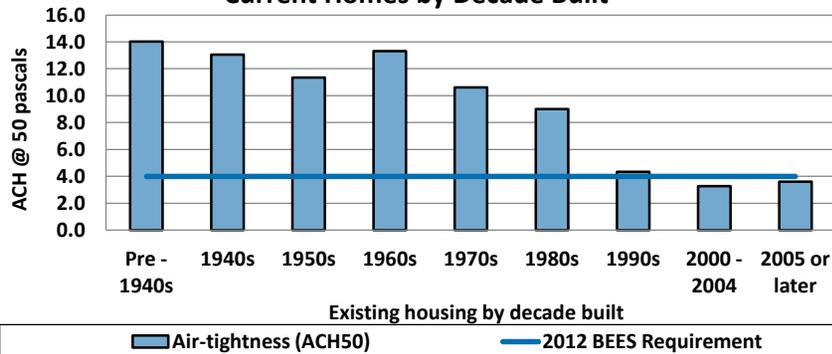


Figure H8: Existing Ventilation Type by Decade Built

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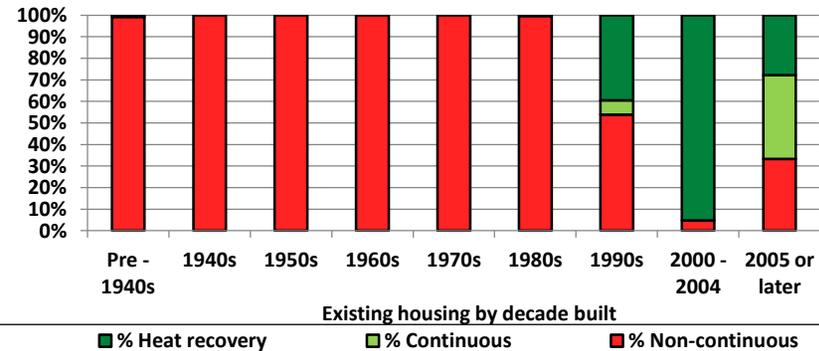


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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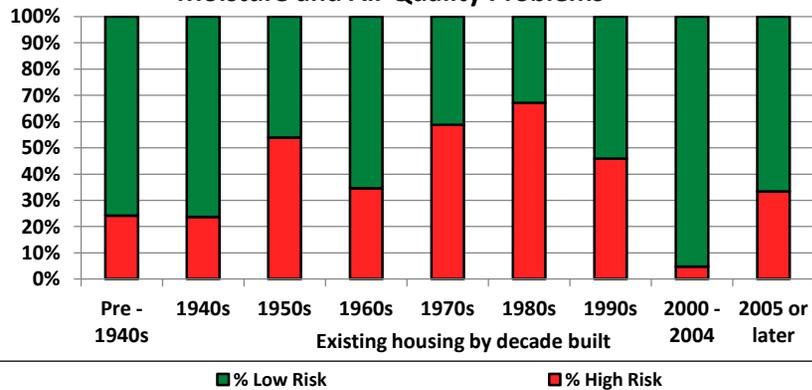
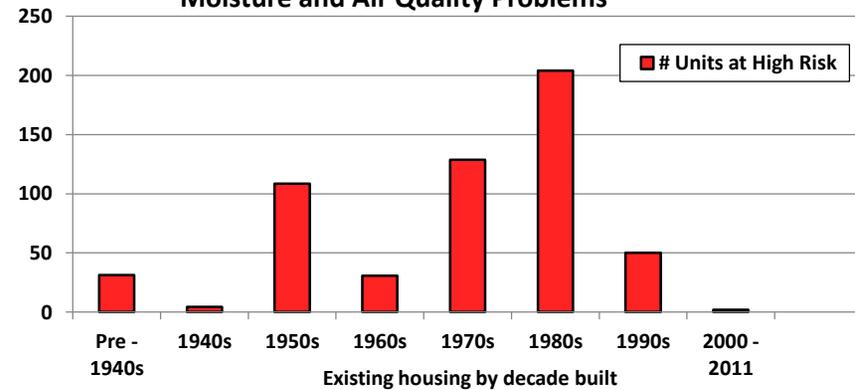


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Cordova city												
Current Cordova city Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost (with PCE)	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtus/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	286	2-star plus	63.4	1,866	\$ 7,766	207	148	27	31	125	\$ 4.67	10.3
Pre- 1940	44	2-star	52.8	1,696	\$ 8,393	226	167	28	30	139	\$ 5.20	11.8
1940- 49	12	1-star plus	49.4	1,784	\$ 7,826	209	153	25	31	130	\$ 4.82	11.1
1950- 59	18	2-star plus	60.3	2,064	\$ 8,543	226	164	30	32	121	\$ 4.62	9.7
1960- 69	19	2-star	57.8	1,840	\$ 8,780	249	196	24	29	145	\$ 4.96	12.9
1970- 79	93	2-star	58.6	1,774	\$ 7,945	221	165	23	29	131	\$ 4.86	11.2
1980- 89	55	2-star plus	66.8	1,895	\$ 7,785	204	145	28	31	117	\$ 4.54	9.3
1990- 99	22	3-star plus	76.8	1,645	\$ 5,583	138	83	23	27	91	\$ 3.62	6.4
2000- 2004	7	4-star plus	87.9	2,300	\$ 5,325	136	75	30	31	60	\$ 2.34	3.7
2005 or later	15	5-star	89.3	2,098	\$ 4,924	122	58	33	30	60	\$ 2.47	3.2

Figure H11: Current Average Energy Use Intensity and Average Square Footage by Decade Built

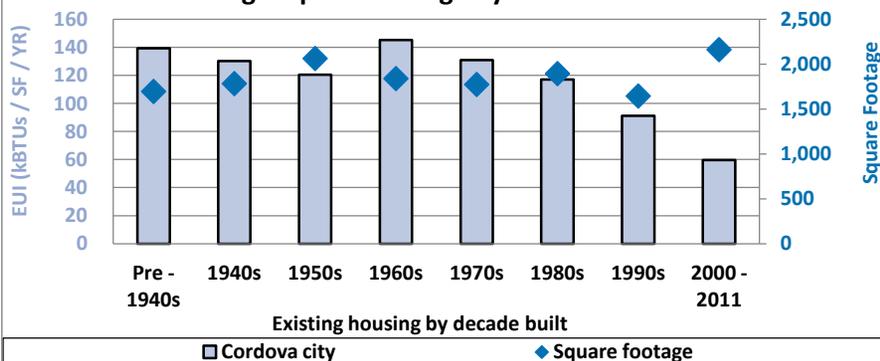
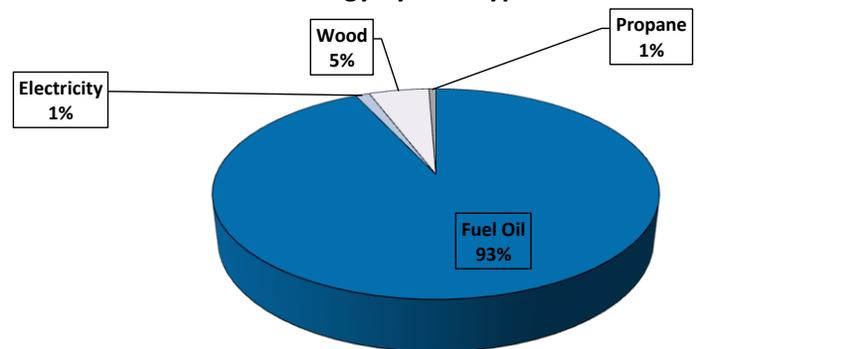


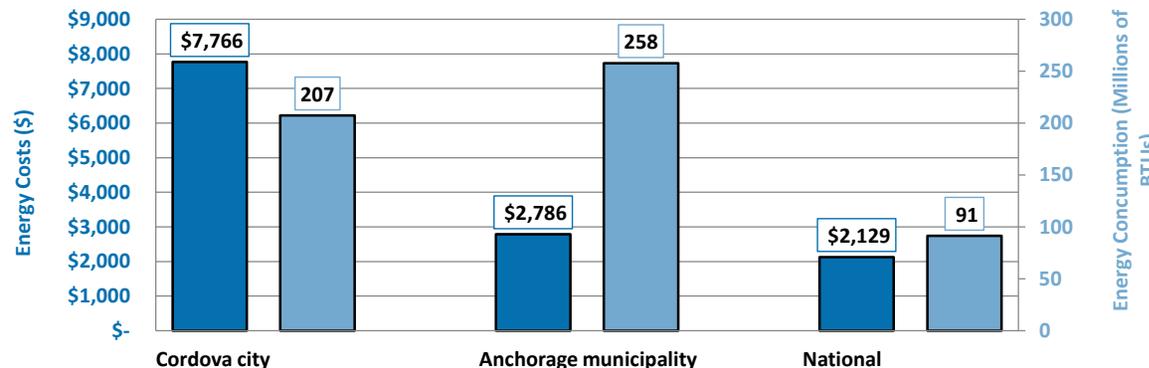
Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type



Current Cordova city Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	286	10.3	18	11	3	15	3	3	0.36	0.34	0.55
Pre- 1940	44	14.0	12	9	3	13	3	2	0.40	NR	0.59
1940- 49	12	13.1	11	10	NR	12	NR	NR	0.30	NR	0.53
1950- 59	18	11.4	18	10	3	16	2	3	0.45	NR	0.53
1960- 69	19	13.3	19	10	3	15	2	2	0.43	NR	0.59
1970- 79	93	10.6	20	10	3	15	3	3	0.37	0.32	0.58
1980- 89	55	9.0	23	14	3	22	2	2	0.33	0.45	0.54
1990- 99	22	4.3	29	17	3	16	5	NR	0.25	0.18	0.45
2000- 2004	7	3.3	36	19	NR	31	NR	NR	0.30	NR	0.31
2005 or later	15	3.6	41	17	22	NR	5	NR	0.23	NR	0.33
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Cordova city

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.7
Owner-occupied	3.0
renter-occupied	1.6

Owner-occupied House with Mortgage, Median Value
\$219,000

Owner-occupied House without a Mortgage, Median Value
\$137,500

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 79,750
Renter-occupied	\$ 36,140
Owner-occupied	\$ 95,099
w/ mortgage	\$ 114,250
w/o mortgage	\$ 61,786

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 961	\$ 11,532
Gross rent	\$ 721	\$ 8,652
Owner-occupied	\$ 1,178	\$ 14,136
Housing units w/ mortgage	\$ 1,642	\$ 19,704
Housing units w/out a mortgage	\$ 466	\$ 5,592

Avg % of Median Income Spent on Energy	9.7%
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Figure H14: Affordability - Housing Costs as a Percent of Income

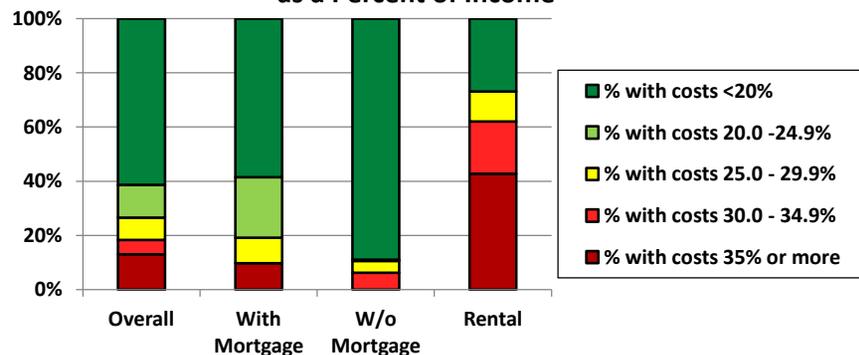
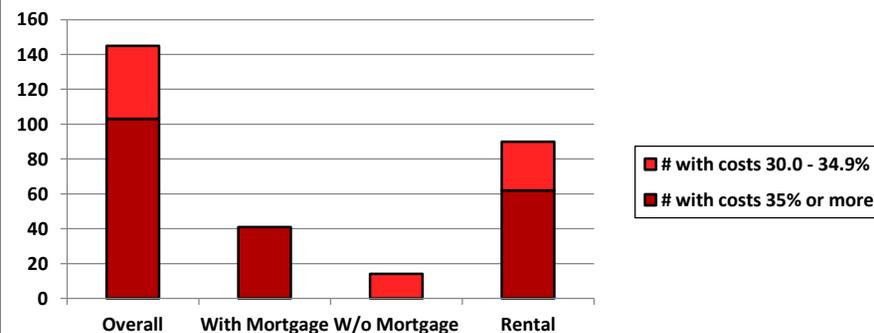


Figure H15: Number of Cost-Burdened Housing Units

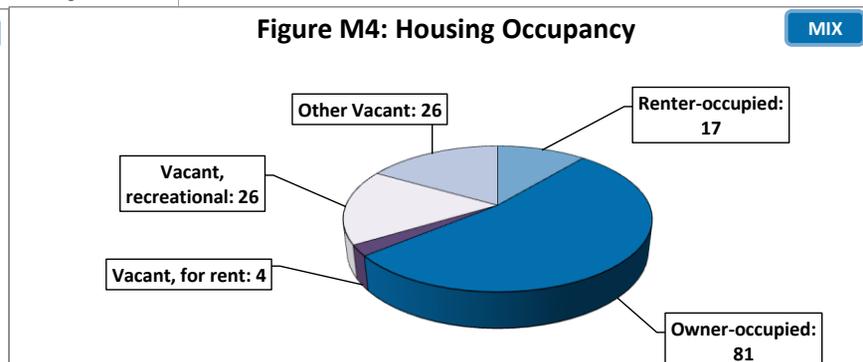
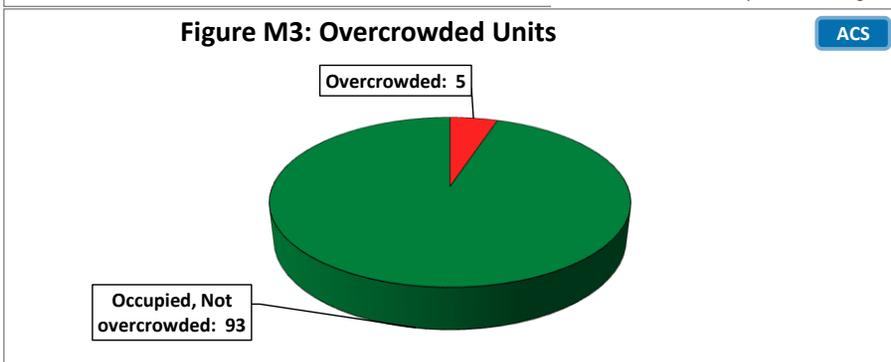
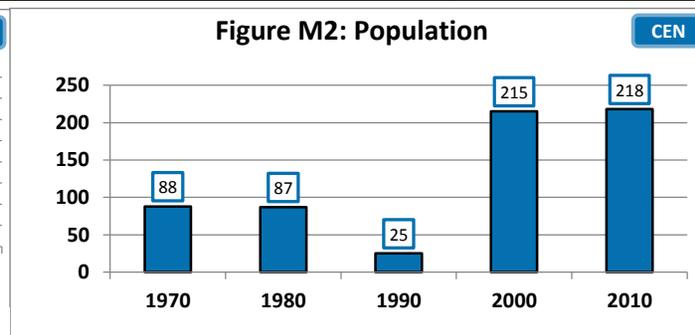
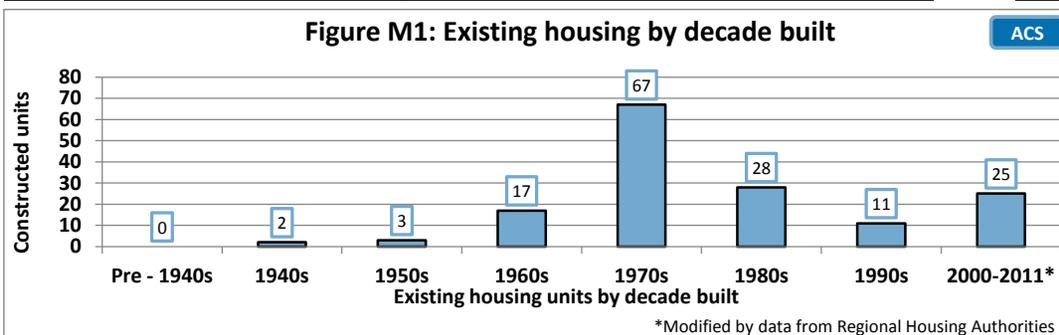


Community Profile for: Gakona CDP

ANCSA Region: Ahtna Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (13,534 HDD)



Gakona CDP Housing Energy Characteristics

Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	17	2-star	57.6	1,502	\$ 7,577	257	173	\$5.21	9.9	51%
Retrofit units	13	3-star plus	74.0	1,560	\$ 5,929	182	123	\$4.12	6.3	46%
New construction	6	5-star	88.5	1,881	\$ 6,127	144	79	\$3.48	3.3	17%

Gakona CDP Housing Envelope Characteristics

Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	17	11.0	26	12	NR	18	NR	NR	0.32	NR	0.54
Retrofit units	13	7.4	36	13	NR	29	NR	NR	0.27	NR	0.51
New construction	6	2.4	43	20	NR	35	13	NR	0.19	NR	0.32

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

MIX

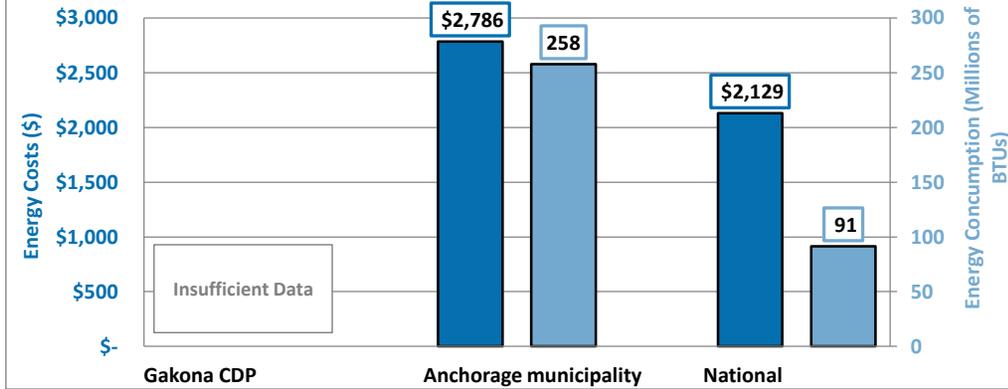
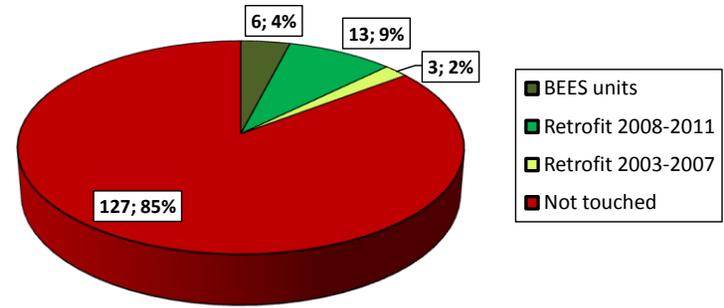


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Gakona CDP

Owner occupied House with Mortgage, Median Value
\$191,700
Owner-occupied House without a Mortgage, Median Value
\$186,700

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 110,167
Renter-occupied	\$ 13,472
Owner-occupied	\$ 111,083
w/ mortgage	\$ 111,000
w/o mortgage	\$ 113,750

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 903	\$ 10,836
Gross rent	\$ 783	\$ 9,396
Owner-occupied	\$ 927	\$ 11,124
Housing units w/ mortgage	\$ 1,750	\$ 21,000
Housing units w/out a mortgage	\$ 413	\$ 4,956

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.10
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.30

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$7,380

Housing Stock Estimates	Number of Units
All Housing	153
All Occupied Housing	98
All Vacant housing	55
Vacant Housing for Sale/Rent	4

Avg % Income on Energy **6.7%**

Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

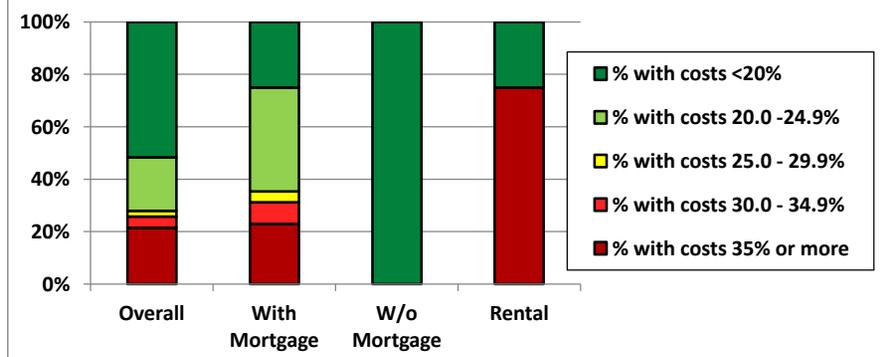
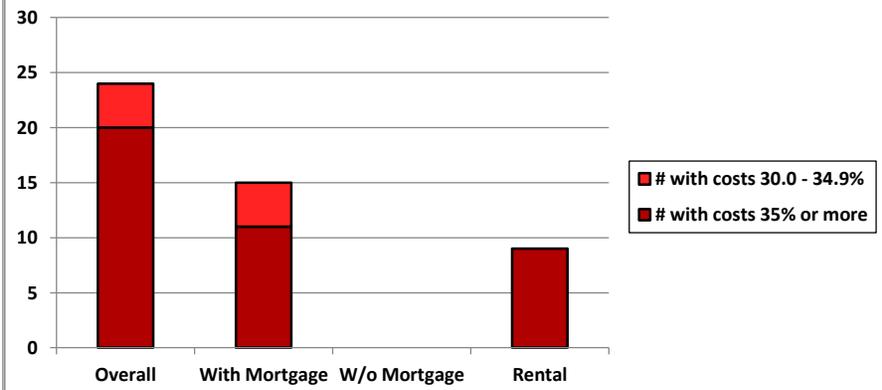


Figure M8: Number of Cost-Burdened Housing Units

ACS



Community Profile for: Glennallen CDP

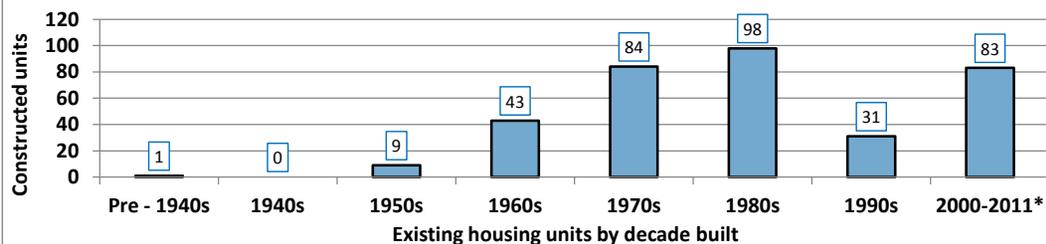
ANCSA Region: Ahtna Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (14,067 HDD)

COMMUNITY - Glennallen CDP

Figure H1: Existing Housing by Decade Built



*Modified by data from Regional Housing Authorities

Figure H2: Population

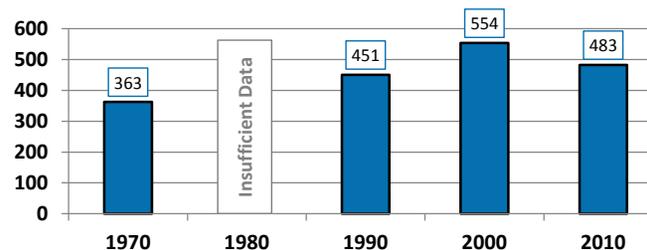


Figure H3: Trends in Housing Unit Size

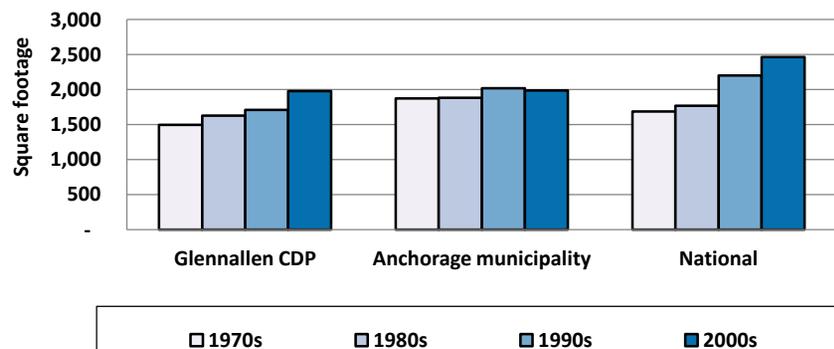
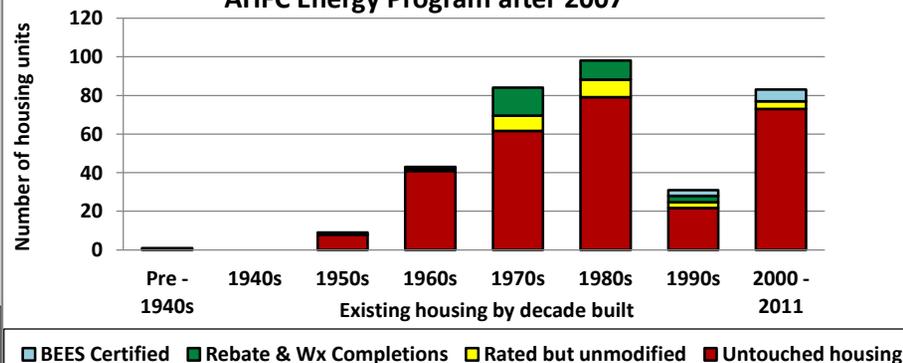


Figure H4: Housing Units Completing an AHFC Energy Program after 2007



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	77	36%
Lack complete kitchen	66	31%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$7,629

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	20
2003-2007	5
1990-2002	62

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	195,667	(gallons)
Nat Gas	-	(ccf)
Electricity	198,604	(kWh)
Wood	585	(cords)
Propane	4,742	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$4.07
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.30

Housing Stock Estimates	Number of Units
All Housing	348
All Occupied Housing	213
All Vacant housing	135
Vacant Housing for Sale or Rent	29

OVERCROWDING & VENTILATION - Glennallen CDP

Figure H5: Overcrowded Units

ACS

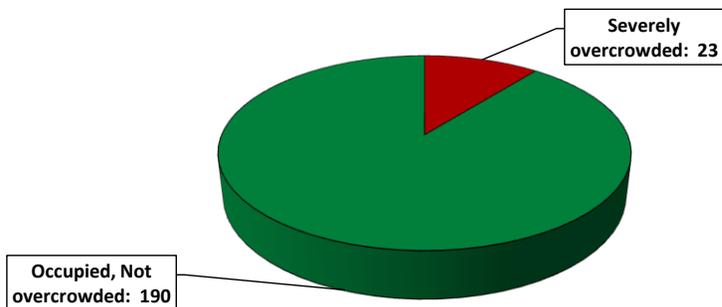


Figure H6: Housing Occupancy

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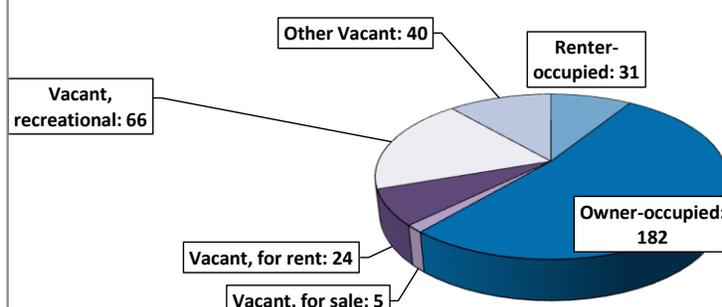


Figure H7: Average Air-Tightness of Current Homes by Decade Built

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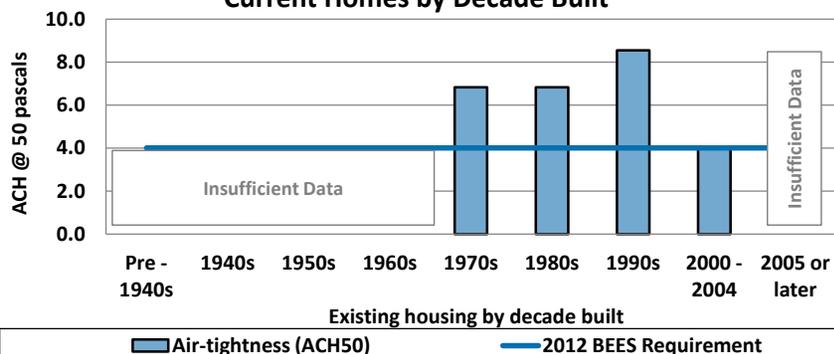


Figure H8: Existing Ventilation Type by Decade Built

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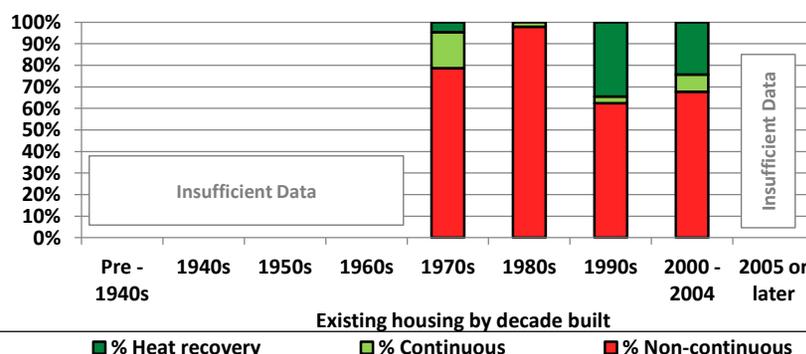


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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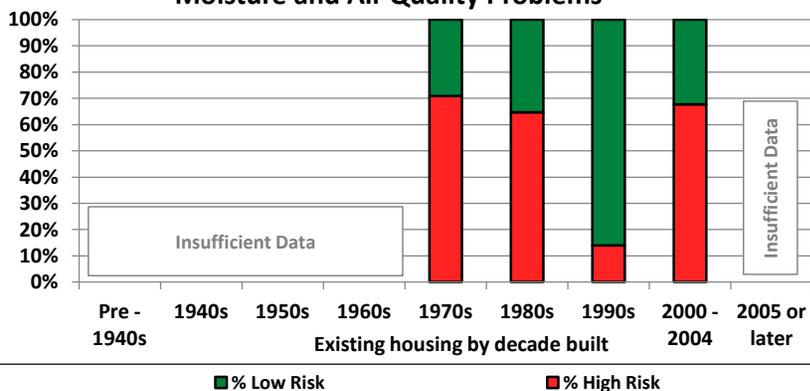
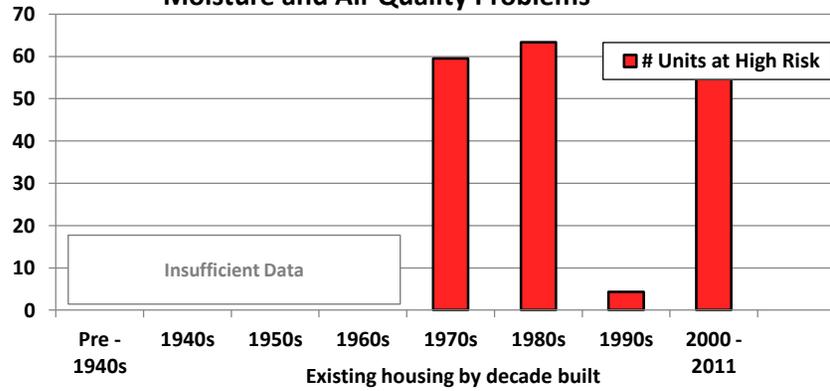


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Glennallen CDP

Current Glennallen CDP Housing Energy Characteristics By Decade Built

Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtUs/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	76	2-star plus	65.8	1,521	\$ 7,629	227	169	26	30	150	\$ 4.92	8.2
Pre- 1940	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	27	3-star plus	73.2	1,494	\$ 7,176	203	134	33	36	127	\$ 4.61	6.2
1980- 89	23	3-star	71.0	1,627	\$ 7,498	227	175	24	28	152	\$ 5.12	8.5
1990- 99	10	2-star	53.8	1,709	\$ 6,817	273	211	14	21	247	\$ 5.01	15.7
2000- 2004	9	4-star	81.5	1,977	\$ 7,189	181	124	26	30	95	\$ 3.80	4.7
2005 or later	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Figure H11: Current Average Energy Use Intensity and Average Square Footage by Decade Built

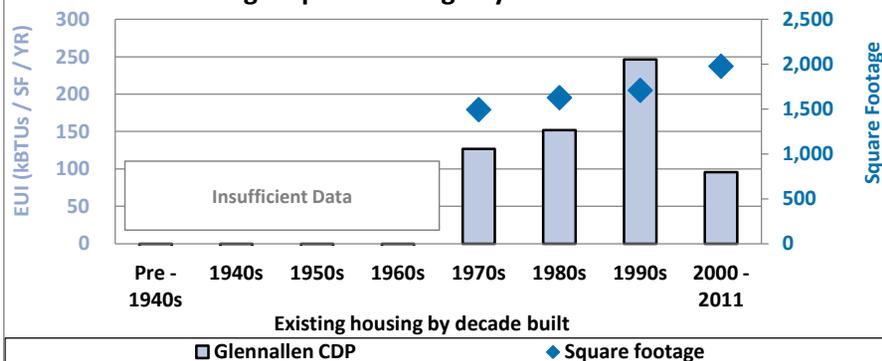
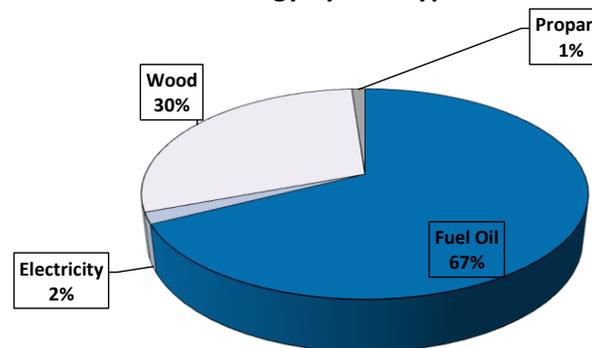


Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type



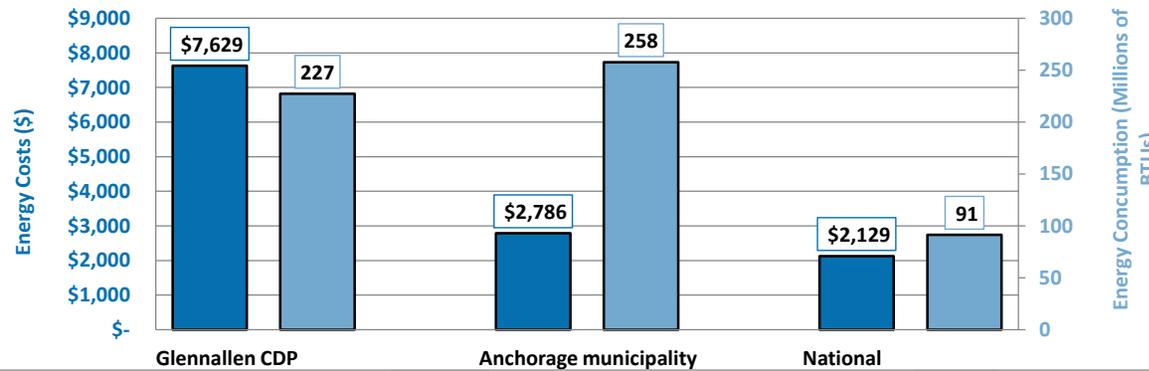
Current Glennallen CDP Housing Envelope Characteristics By Decade Built

Current Residential Units by Year Built	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	76	8.3	25	14	10	24	3	3	0.41	0.29	0.47
Pre- 1940	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	27	6.8	29	16	17	27	3	3	0.51	0.28	0.47
1980- 89	23	6.8	27	13	5	25	3	3	0.30	0.40	0.48
1990- 99	10	8.5	29	19	24	12	3	NR	0.22	0.25	0.39
2000- 2004	9	4.0	40	18	NR	37	3	NR	0.25	0.18	0.40
2005 or later	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009 - Climate Zone 7	7.0	38	21	15	38	15	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7	4.0	43	25	15	38	15	15	15	0.30	0.30	0.30

AFFORDABILITY - Glennallen CDP

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.8
Owner-occupied	2.7
renter-occupied	3.4

Owner-occupied House with Mortgage, Median Value	\$172,100
Owner-occupied House without a Mortgage, Median Value	\$115,200

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 72,716
Renter-occupied	\$ 88,036
Owner-occupied w/ mortgage	\$ 101,797
Owner-occupied w/o mortgage	\$ 51,685

	Median Housing Costs	
	Monthly	Annual
All-occupied	\$ 435	\$ 5,220
Gross rent	\$ 825	\$ 9,900
Owner-occupied	\$ 384	\$ 4,608
Housing units w/ mortgage	\$ 1,230	\$ 14,760
Housing units w/out a mortgage	\$ 314	\$ 3,768

Avg % of Median Income Spent on Energy	10.5%
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Figure H14: Affordability - Housing Costs as a Percent of Income

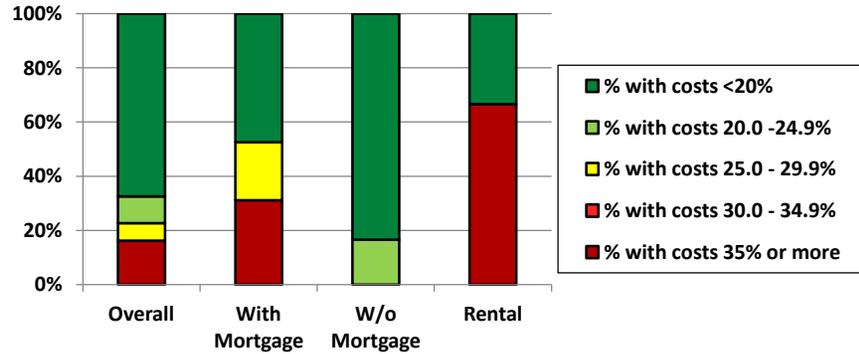


Figure H15: Number of Cost-Burdened Housing Units

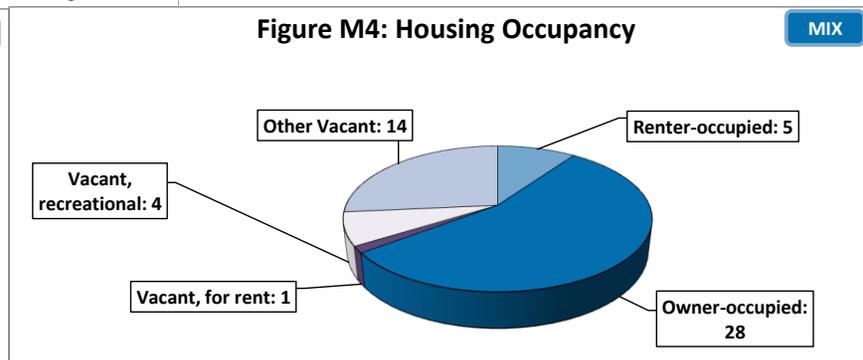
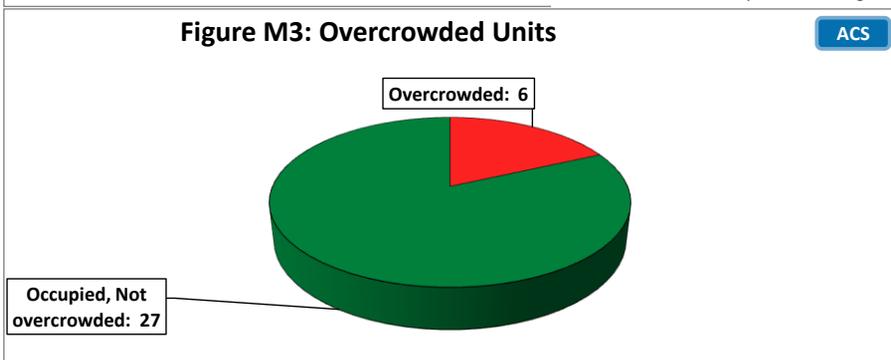
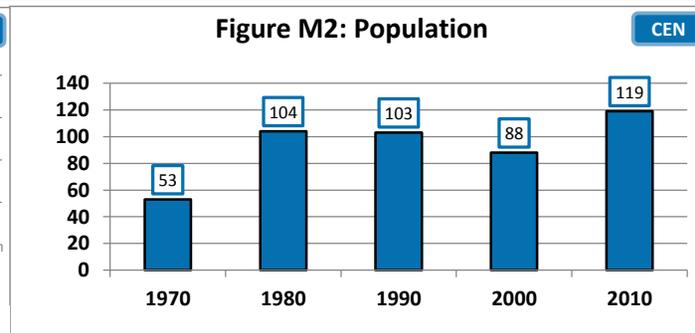
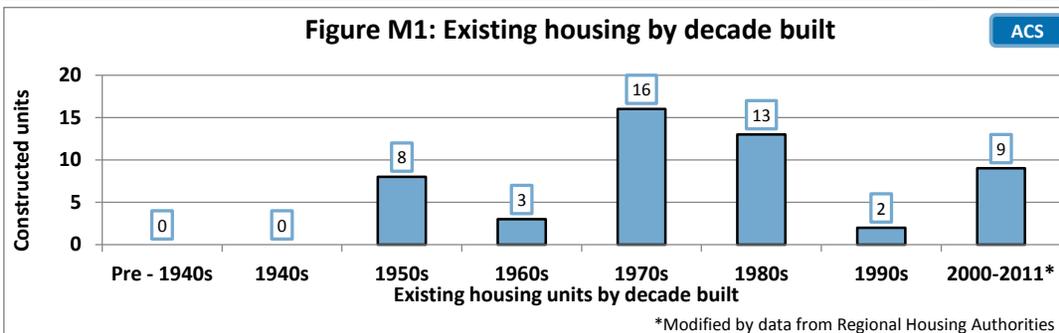


Community Profile for: Gulkana CDP

ANCSA Region: Ahtna Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (14,004 HDD)



Gulkana CDP Housing Energy Characteristics										
Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	3	2-star plus	61.6	1,102	\$ 6,534	171	145	\$5.88	7.7	33%
Retrofit units	2	NR	NR	NR	NR	NR	NR	NR	NR	NR
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR

Gulkana CDP Housing Envelope Characteristics											
Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	3	14.8	31	15	NR	NR	NR	NR	0.35	NR	0.45
Retrofit units	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

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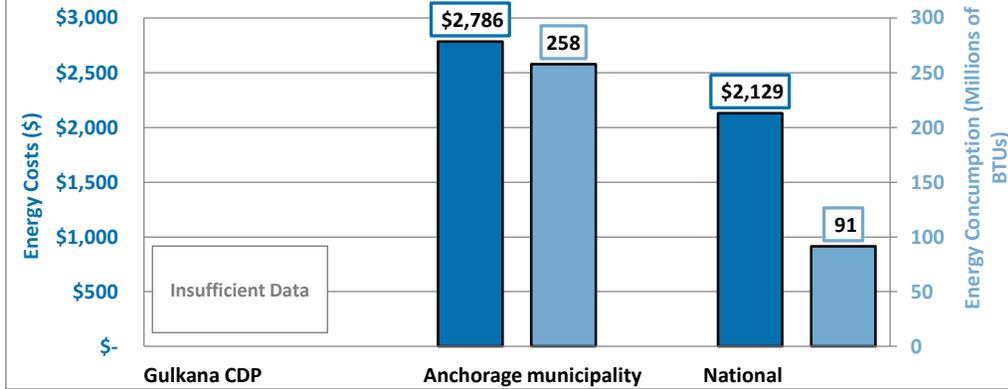
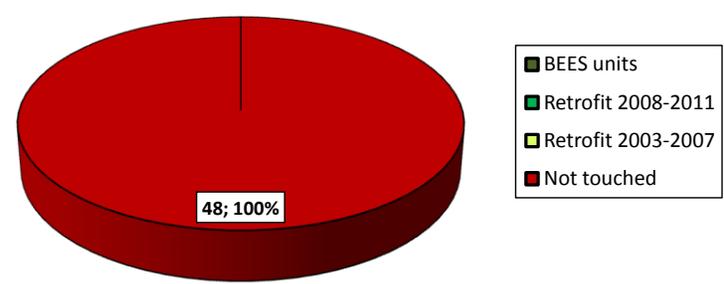


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Gulkana CDP

Owner occupied House with Mortgage, Median Value
\$265,000
Owner-occupied House without a Mortgage, Median Value
\$115,600

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 50,625
Renter-occupied	\$ 70,417
Owner-occupied	\$ 26,667
w/ mortgage	\$ 78,750
w/o mortgage	\$ 24,063

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 356	\$ 4,272
Gross rent	NR	NR
Owner-occupied	\$ 357	\$ 4,284
Housing units w/ mortgage	\$ 525	\$ 6,300
Housing units w/out a mortgage	\$ 306	\$ 3,672

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.06
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.30

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$6,451

Housing Stock Estimates	Number of Units
All Housing	51
All Occupied Housing	33
All Vacant housing	18
Vacant Housing for Sale/Rent	1

Avg % Income on Energy	12.7%
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Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

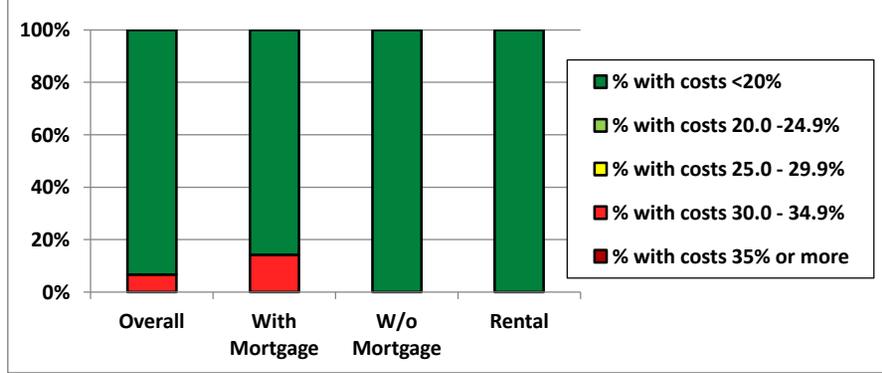
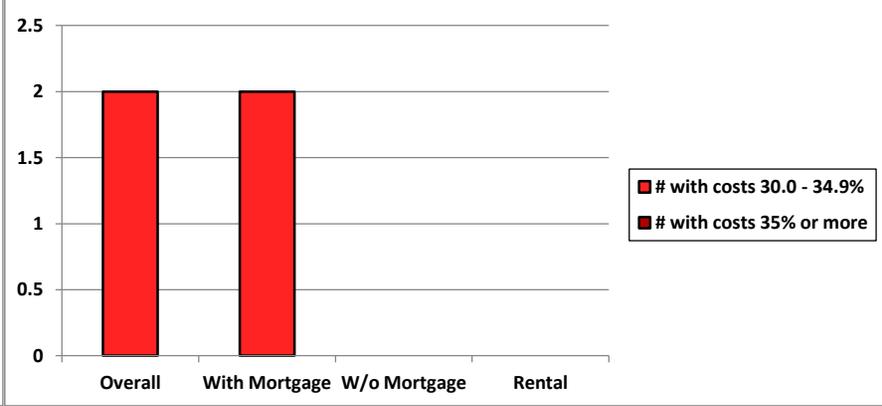


Figure M8: Number of Cost-Burdened Housing Units

ACS

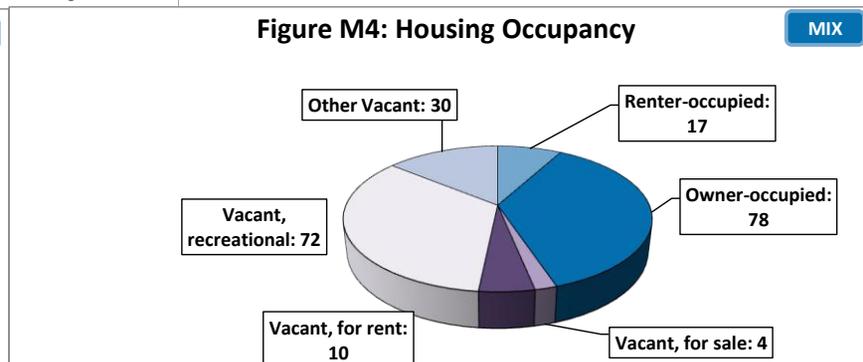
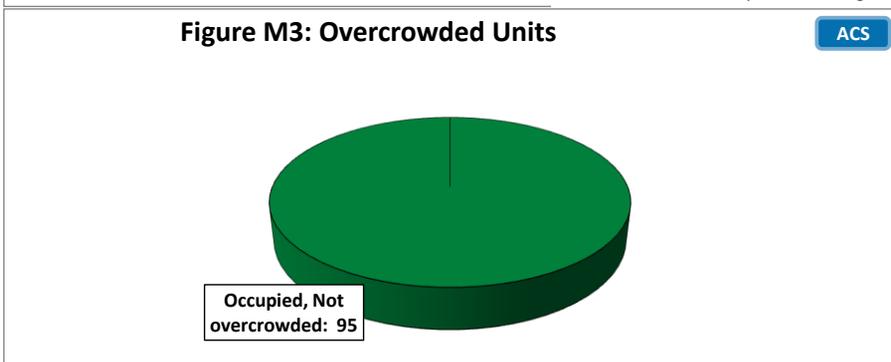
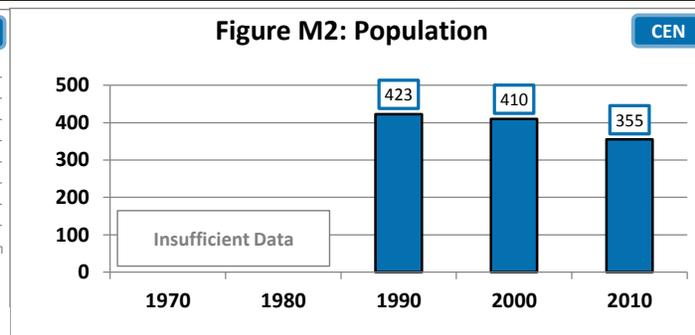
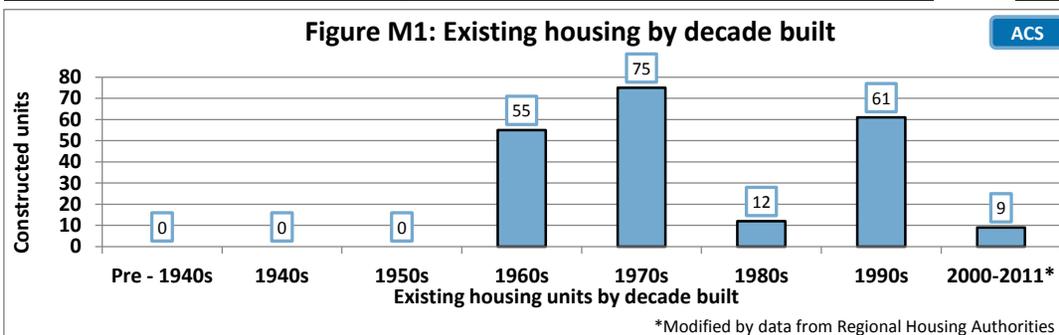


Community Profile for: Kenny Lake CDP

ANCSA Region: Ahna Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (14,036 HDD)



Kenny Lake CDP Housing Energy Characteristics

Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	11	2-star plus	64.4	1,895	\$ 9,045	319	177	\$5.22	10.5	66%
Retrofit units	5	3-star	73.0	1,712	\$ 7,380	206	135	\$4.88	7.5	40%
New construction	3	5-star	90.3	2,164	\$ 6,192	154	69	\$2.90	3.2	33%

Kenny Lake CDP Housing Envelope Characteristics

Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	11	9.0	23	14	7	26	3	3	0.41	NR	0.50
Retrofit units	5	6.0	29	12	19	24	3	NR	0.33	NR	0.46
New construction	3	2.2	47	20	NR	NR	NR	NR	0.24	NR	0.29
		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

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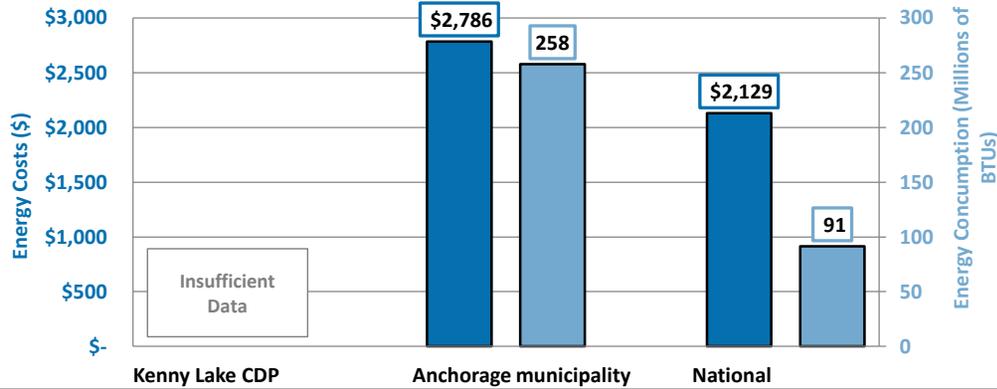
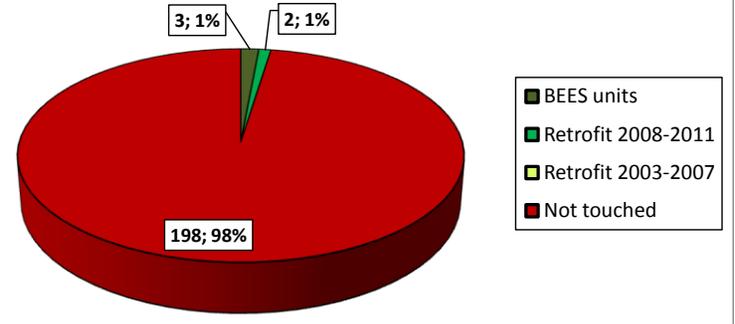


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Kenny Lake CDP

Owner occupied House with Mortgage, Median Value		Median Annual Household Income		Median Housing Costs		
NR		Housing Units	Household Income		Monthly	Annual
		All-occupied	\$ 60,861	All-occupied	\$ 569	\$ 6,828
		Renter-occupied	NR	Gross rent	NR	NR
Owner-occupied House without a Mortgage, Median Value		Owner-occupied	\$ 60,625	Owner-occupied	\$ 539	\$ 6,468
\$183,800		w/ mortgage	NR	Housing units w/ mortgage	NR	NR
		w/o mortgage	\$ 43,542	Housing units w/out a mortgage	\$ 171	\$ 2,052
Estimated Energy Prices as of January 2013		Average Annual Energy Cost		Housing Stock Estimates		Number of Units
#1 Fuel oil cost (\$ / gallon)	\$ 4.06	With PCE	NO PCE	All Housing	212	
Electricity with PCE (\$/kWh)	No PCE	Without PCE	\$8,966	All Occupied Housing	95	
Electricity without PCE (\$/kWh)	\$ 0.30	Avg % Income on Energy		All Vacant housing	117	
		14.7%		Vacant Housing for Sale/Rent	14	

Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

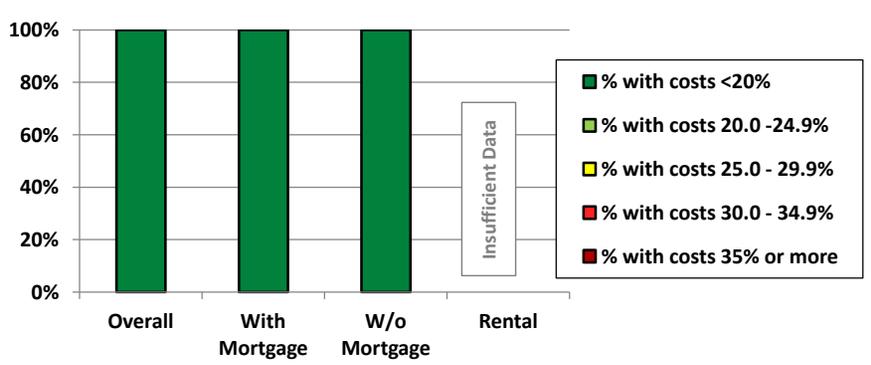
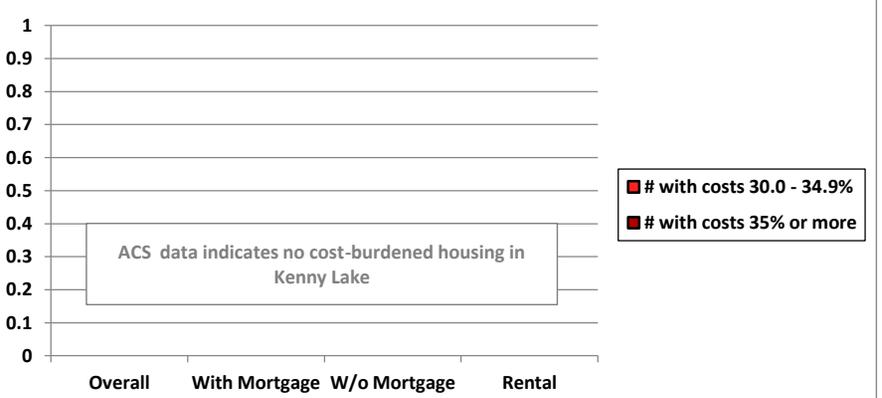


Figure M8: Number of Cost-Burdened Housing Units

ACS

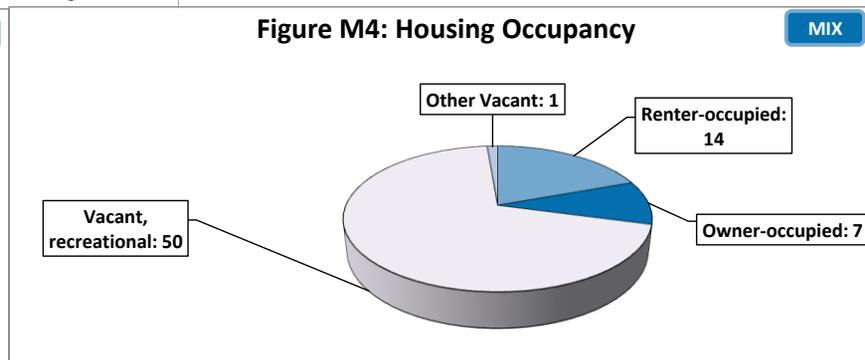
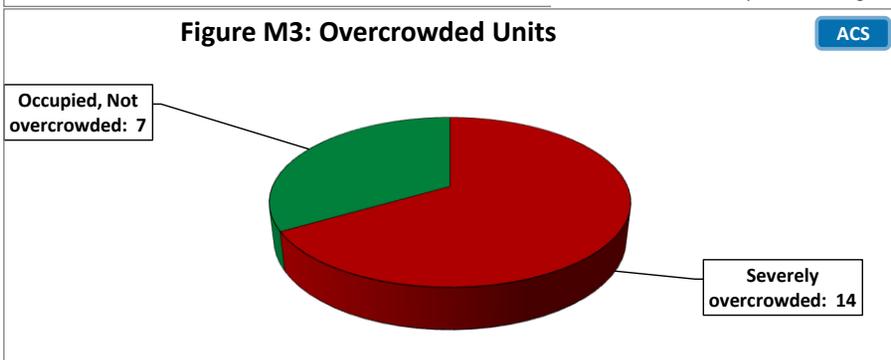
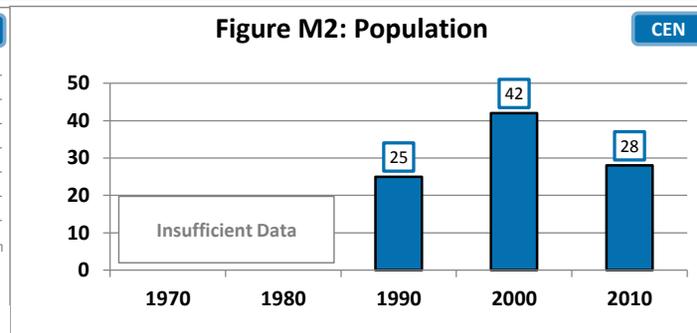
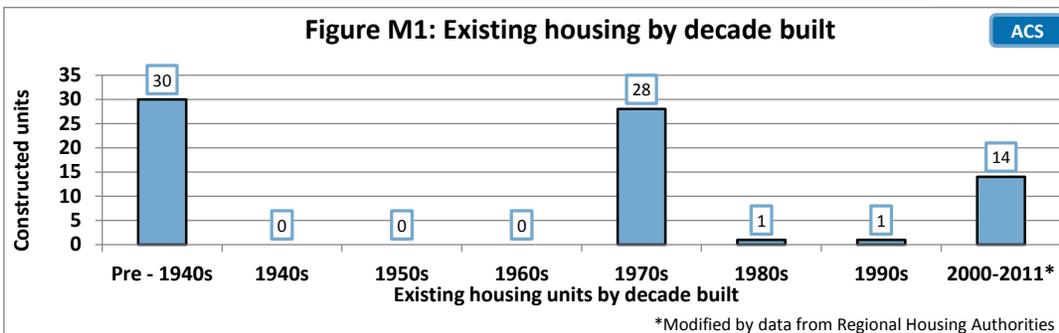


Community Profile for: McCarthy CDP

ANCSA Region: Ahna Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (13,053 HDD)



McCarthy CDP Housing Energy Characteristics

Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	2	NR	NR	NR	NR	NR	NR	NR	NR	NR
Retrofit units	1	NR	NR	NR	NR	NR	NR	NR	NR	NR
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR

McCarthy CDP Housing Envelope Characteristics

Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Retrofit units	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

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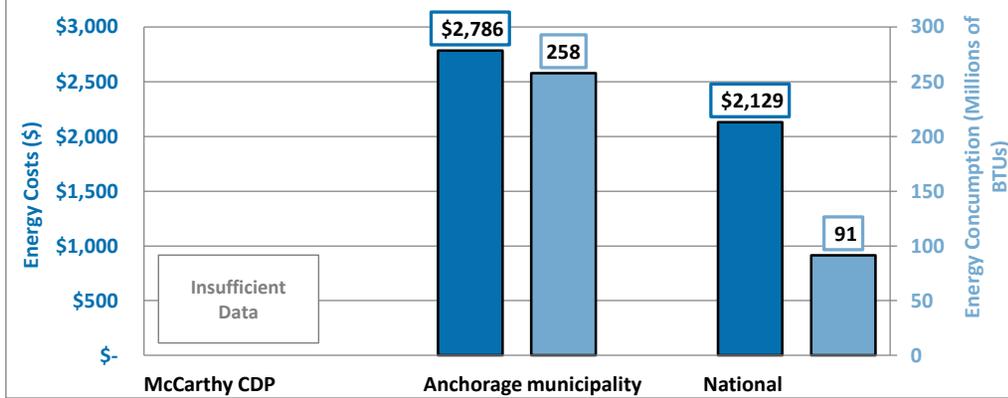
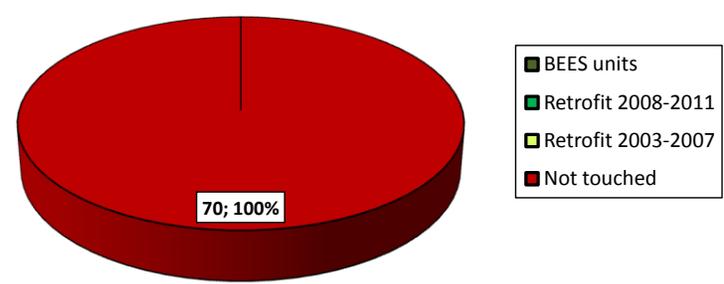


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - McCarthy CDP

Owner occupied House with Mortgage, Median Value
NR

Owner-occupied House without a Mortgage, Median Value
NR

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 143,125
Renter-occupied	NR
Owner-occupied	NR
w/ mortgage	NR
w/o mortgage	NR

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 713	\$ 8,556
Gross rent	NR	NR
Owner-occupied	NR	NR
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	NR	NR

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.50
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.08
Natural gas base rate	\$ 0.11
Natural gas fuel charge	\$ 0.11

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$1,049

Avg % Income on Energy	0.7%
------------------------	-------------

Housing Stock Estimates	Number of Units
All Housing	72
All Occupied Housing	21
All Vacant housing	51
Vacant Housing for Sale/Rent	0

Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

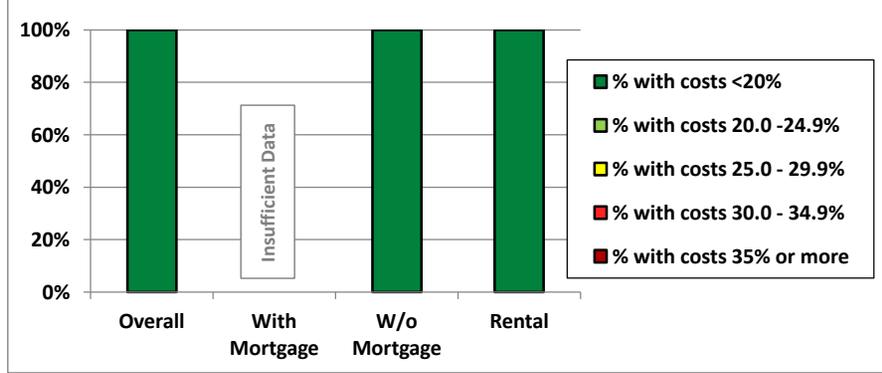
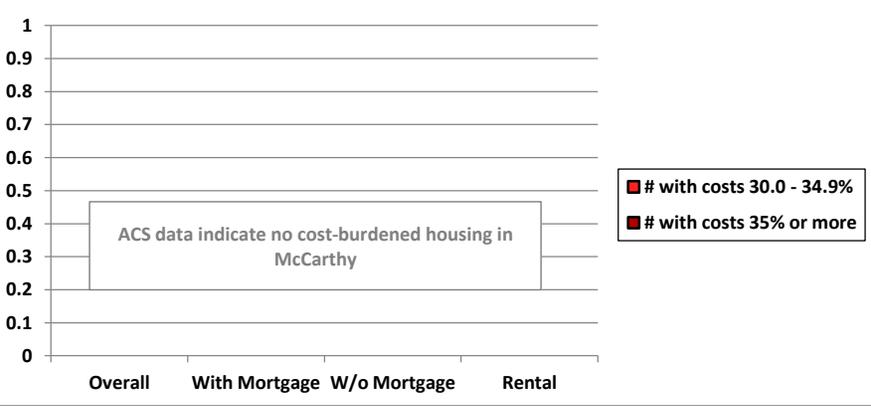


Figure M8: Number of Cost-Burdened Housing Units

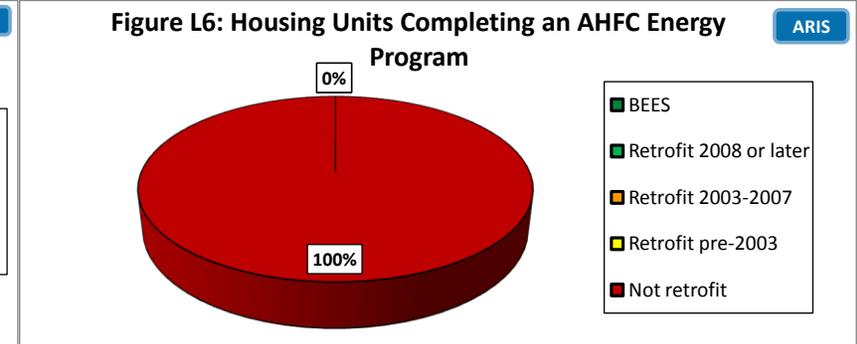
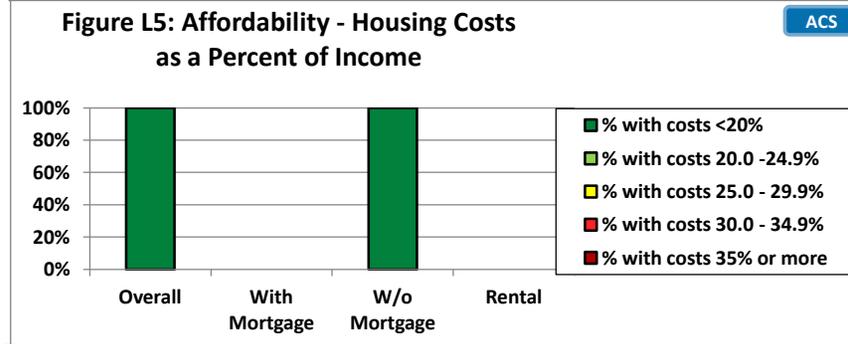
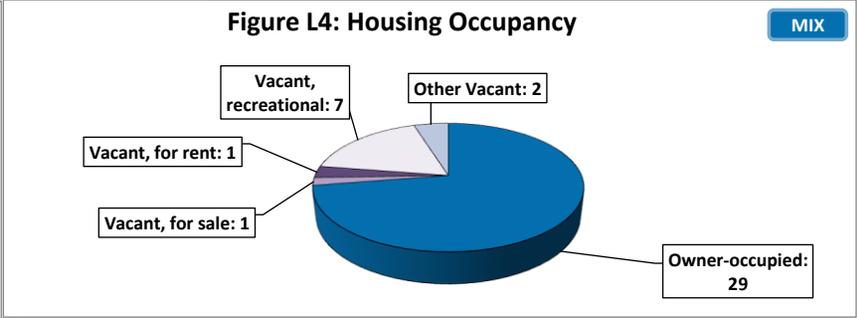
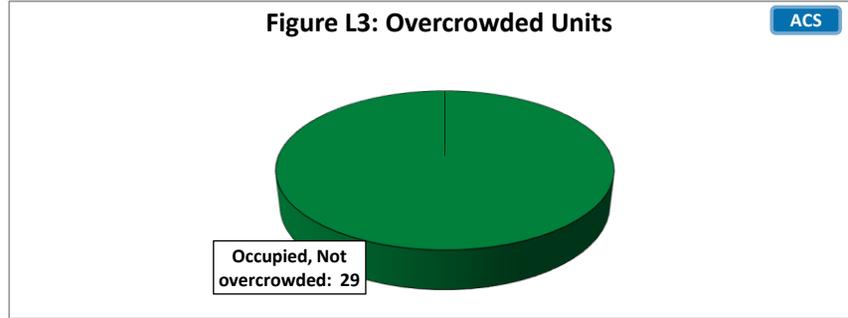
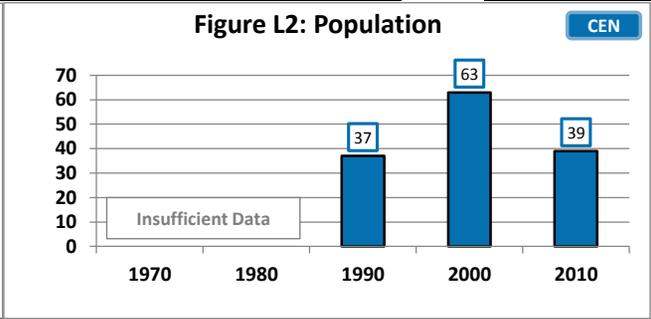
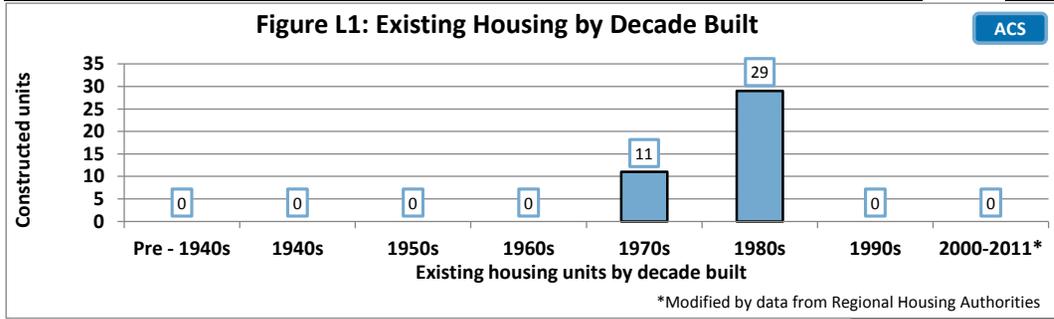
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Community Profile for: Mendeltna CDP

ANCSA Region: Ahtna Inc

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value
NR

Owner-occupied House without a Mortgage, Median Value
NR

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

Median Annual Household Income	
Housing Units	Household Income
All-occupied	NR
Renter-occupied	NR
Owner-occupied	NR
w/ mortgage	NR
w/o mortgage	NR

Housing Stock Estimates	Number of Units
All Housing	40
All Occupied Housing	29
All Vacant housing	11

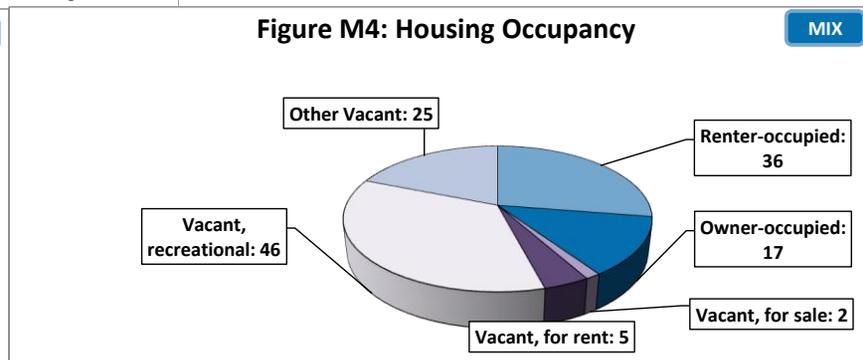
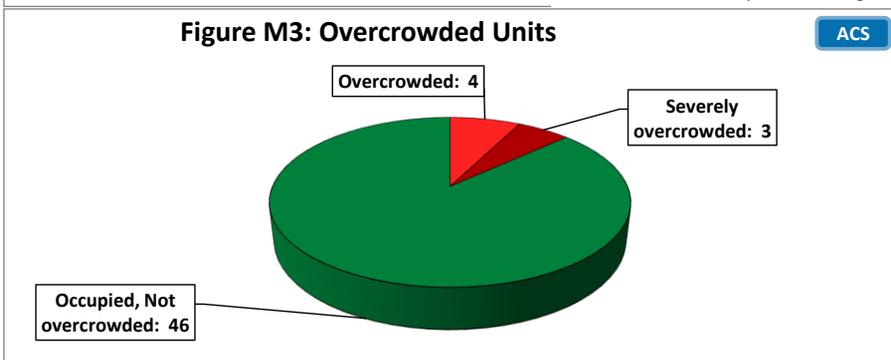
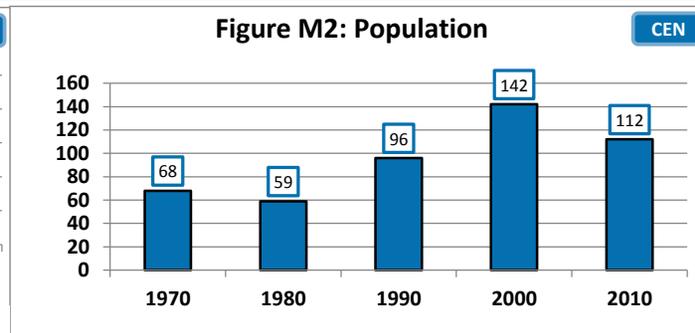
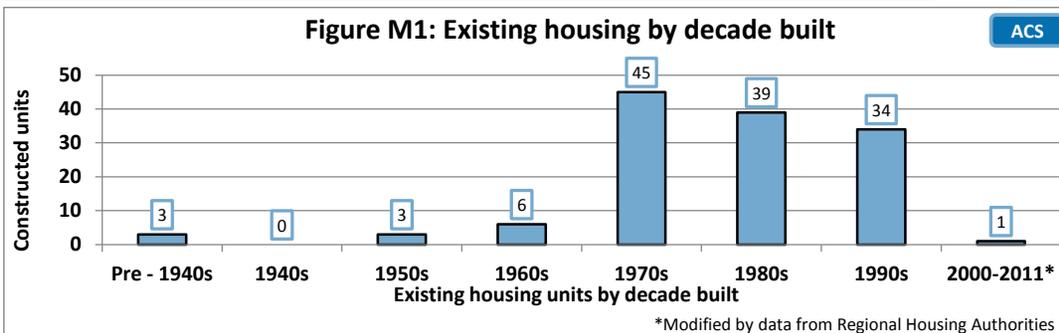
Median Housing Costs		
	Monthly	Annual
All-occupied	NR	NR
Gross rent	NR	NR
Owner-occupied	NR	NR
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	NR	NR

Community Profile for: Mentasta Lake CDP

ANCSA Region: Ahtna Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (15,400 HDD)



Mentasta Lake CDP Housing Energy Characteristics											
Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation	
Pre-retrofit units	7	3-star	72.2	934	\$ 6,006	218	245	\$6.91	12.7	50%	
Retrofit units	5	4-star	78.4	1,096	\$ 5,297	164	149	\$4.88	7.5	0%	
New construction	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	

Mentasta Lake CDP Housing Envelope Characteristics											
Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	7	8.6	28	10	29	NR	NR	2	0.33	NR	0.49
Retrofit units	5	5.5	50	10	28	NR	NR	2	0.32	NR	0.48
New construction	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

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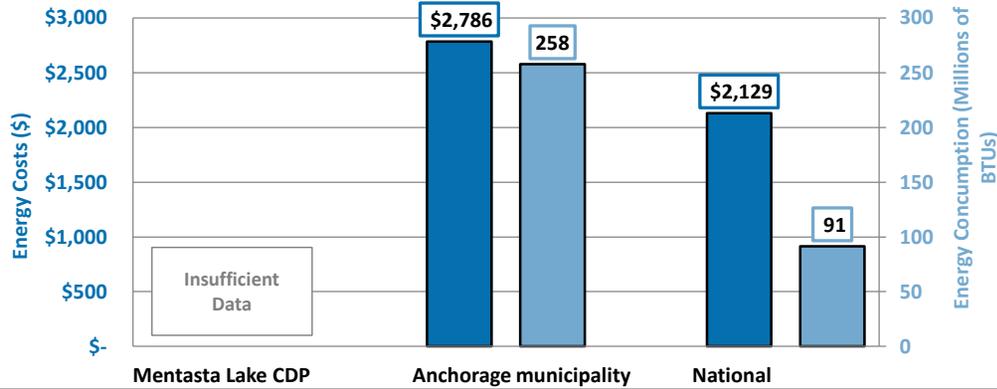
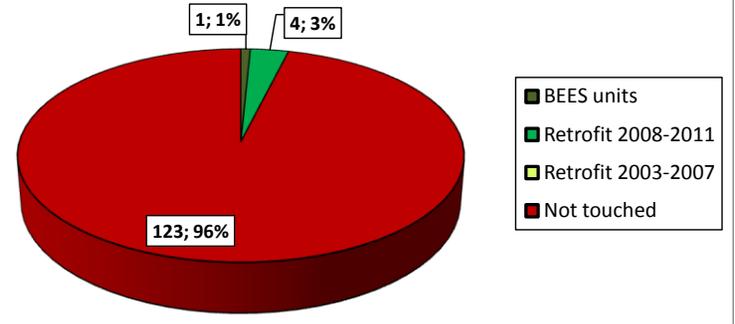


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Mentasta Lake CDP

Owner occupied House with Mortgage, Median Value		Median Annual Household Income		Median Housing Costs		
NR		Housing Units	Household Income		Monthly	Annual
		All-occupied	\$ 26,250	All-occupied	\$ 621	\$ 7,452
		Renter-occupied	\$ 25,833	Gross rent	\$ 658	\$ 7,896
		Owner-occupied	\$ 27,083	Owner-occupied	\$ 608	\$ 7,296
		w/ mortgage	NR	Housing units w/ mortgage	NR	NR
		w/o mortgage	\$ 25,833	Housing units w/out a mortgage	\$ 467	\$ 5,604
Owner-occupied House without a Mortgage, Median Value		Average Annual Energy Cost		Housing Stock Estimates		Number of Units
\$145,800		With PCE	NO PCE	All Housing	131	
		Without PCE	\$8,115	All Occupied Housing	53	
				All Vacant housing	78	
				Vacant Housing for Sale/Rent	7	
Estimated Energy Prices as of January 2013		Avg % Income on Energy				
#1 Fuel oil cost (\$ / gallon)	\$ 4.06	30.9%				
Electricity with PCE (\$/kWh)	\$ 0.19					
Electricity without PCE (\$/kWh)	\$ 0.69					

Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

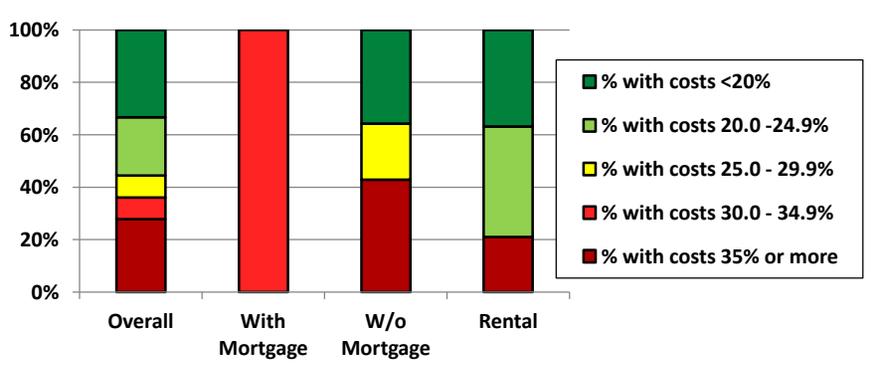


Figure M8: Number of Cost-Burdened Housing Units

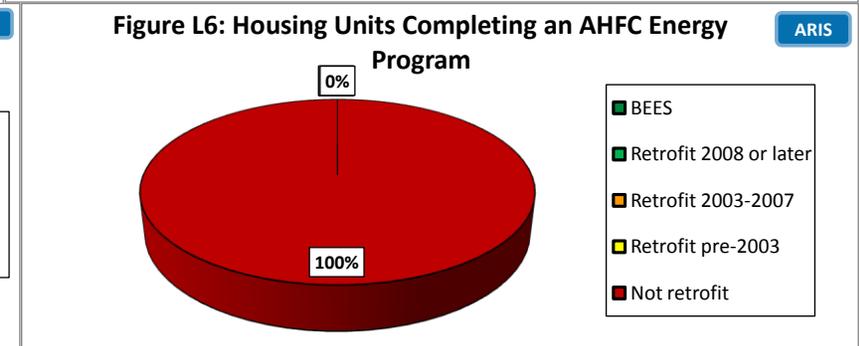
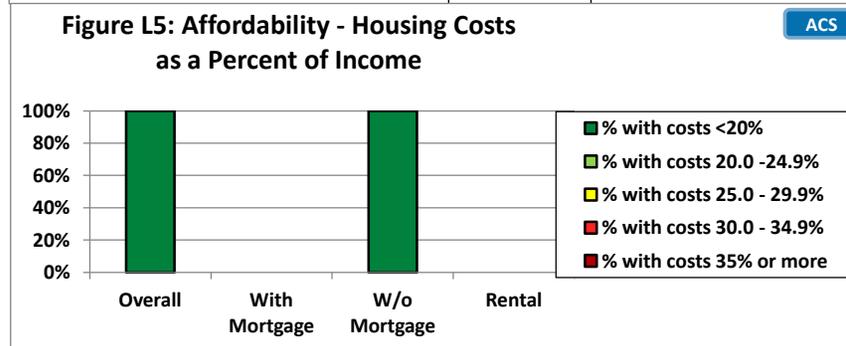
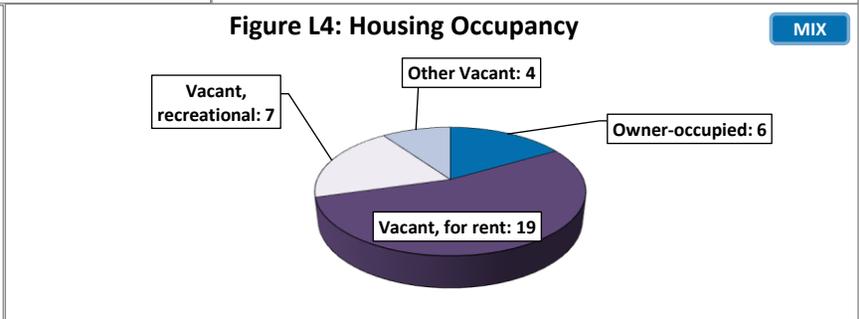
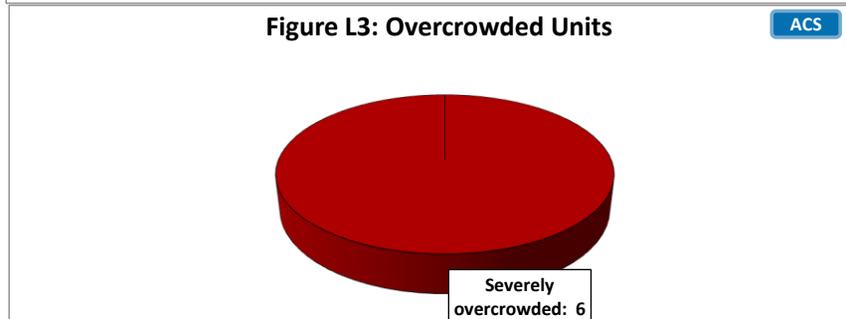
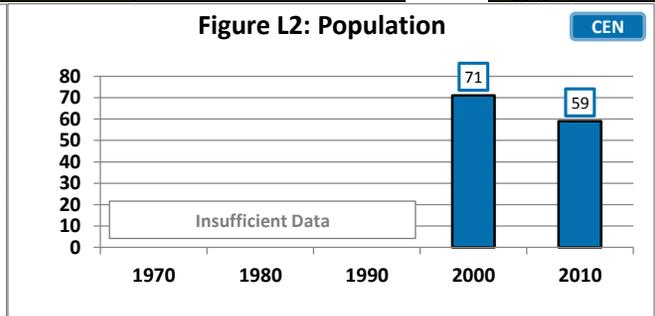
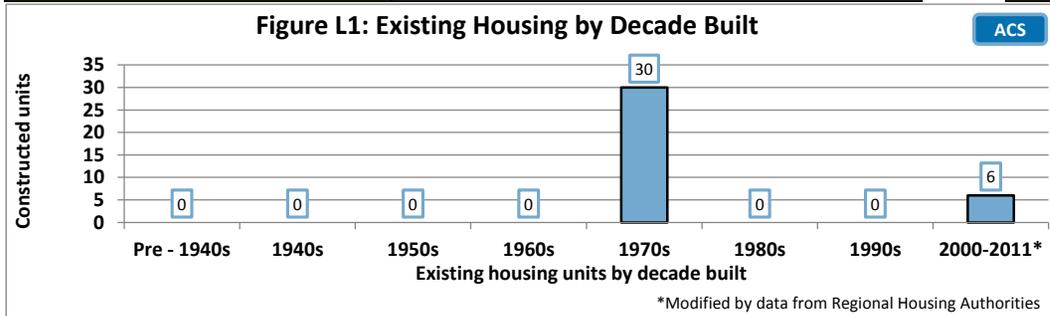
ACS



Community Profile for: Nelchina CDP

ANCSA Region: Ahtna Inc

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value
NR

Owner-occupied House without a Mortgage, Median Value
NR

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

Median Annual Household Income	
Housing Units	Household Income
All-occupied	NR
Renter-occupied	NR
Owner-occupied	NR
w/ mortgage	NR
w/o mortgage	NR

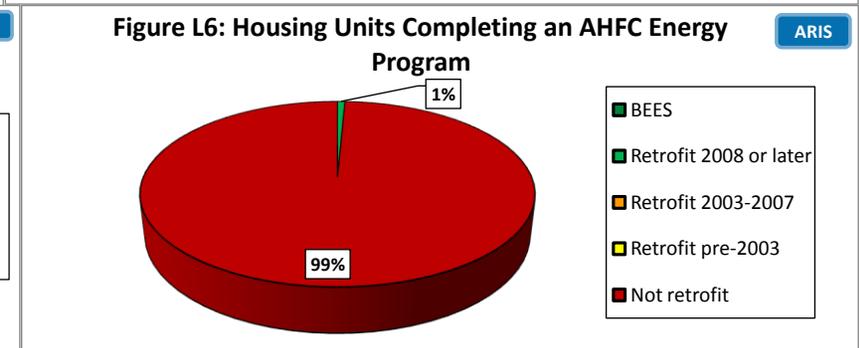
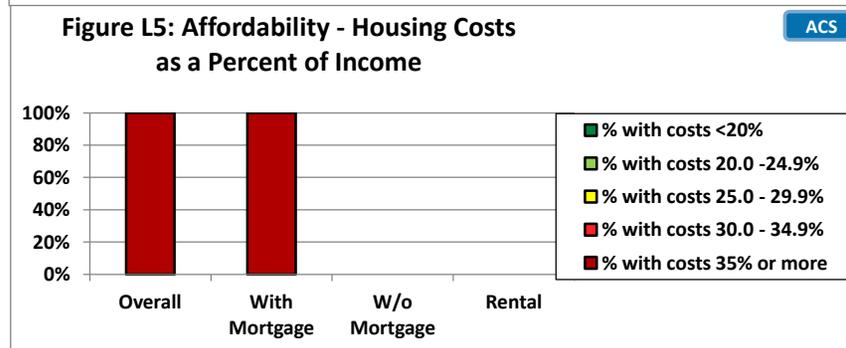
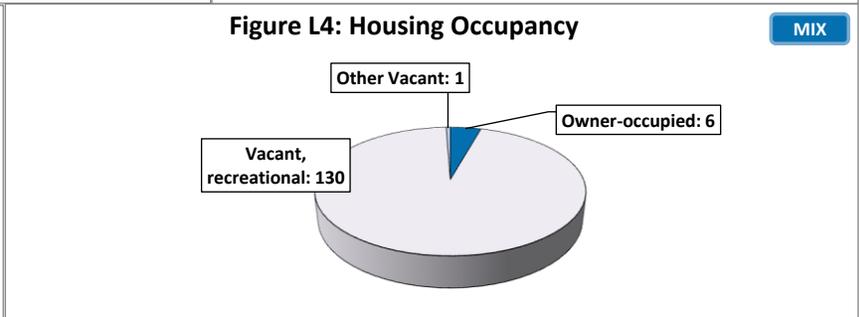
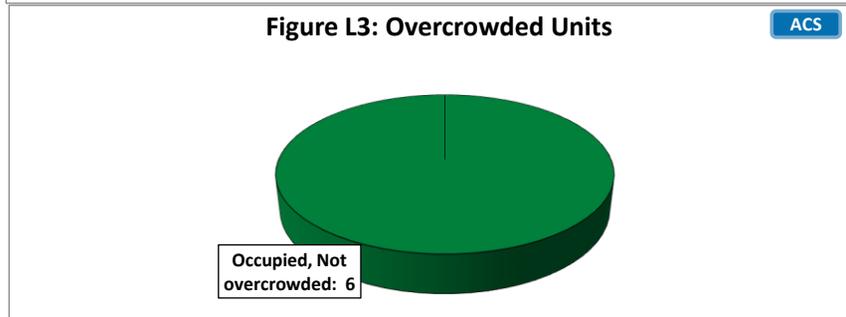
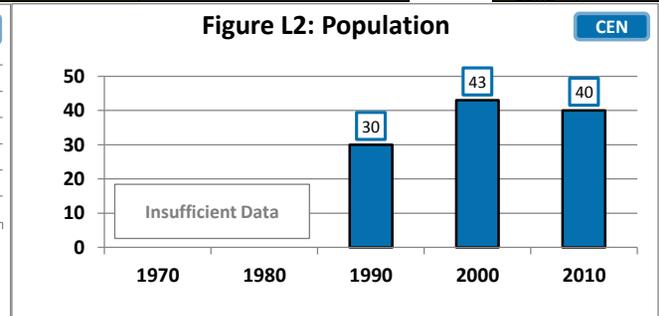
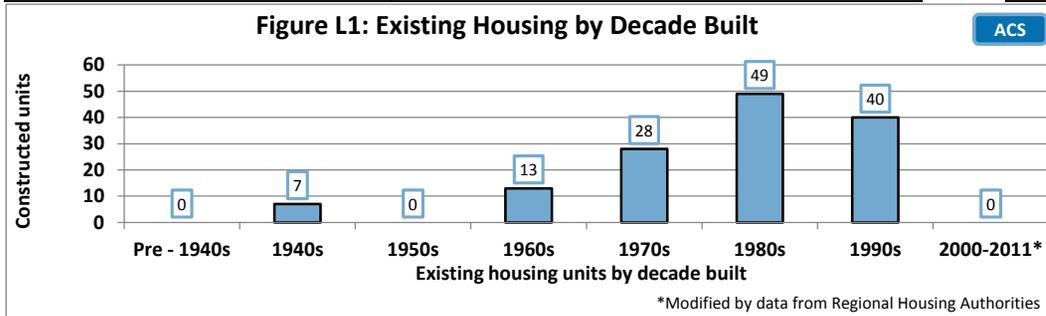
Housing Stock Estimates	Number of Units
All Housing	36
All Occupied Housing	6
All Vacant housing	30

Median Housing Costs		
	Monthly	Annual
All-occupied	NR	NR
Gross rent	NR	NR
Owner-occupied	NR	NR
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	NR	NR

Community Profile for: Paxson CDP

ANCSA Region: Ahtna Inc

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value
NR

Owner-occupied House without a Mortgage, Median Value
NR

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 3.96
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 1.70

Median Annual Household Income	
Housing Units	Household Income
All-occupied	NR
Renter-occupied	NR
Owner-occupied	NR
w/ mortgage	NR
w/o mortgage	NR

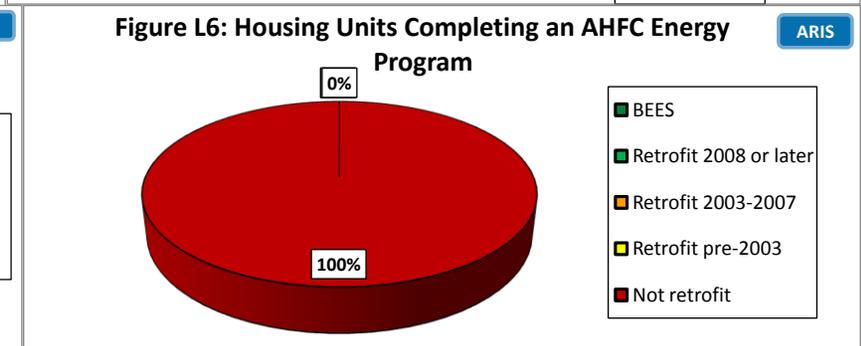
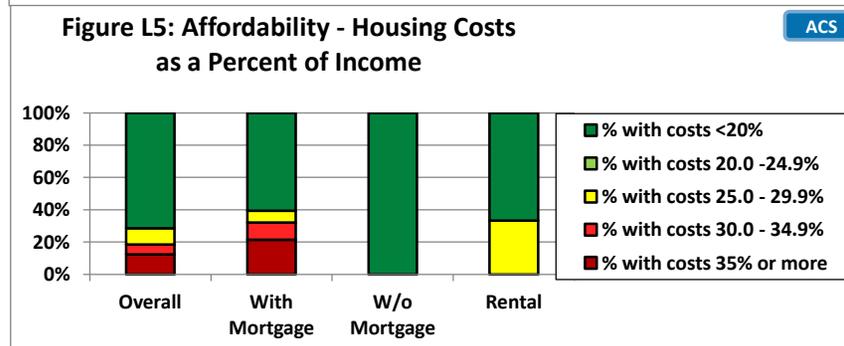
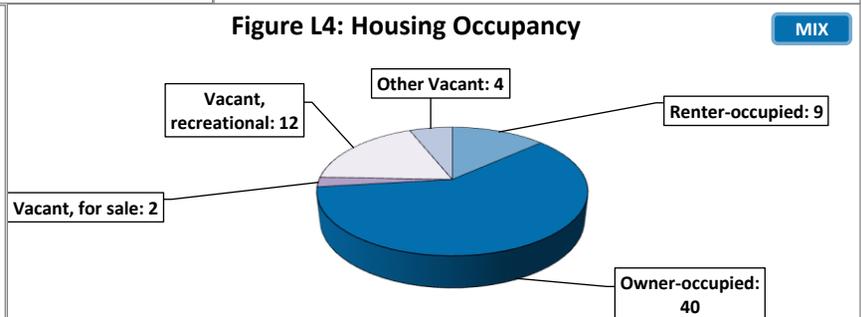
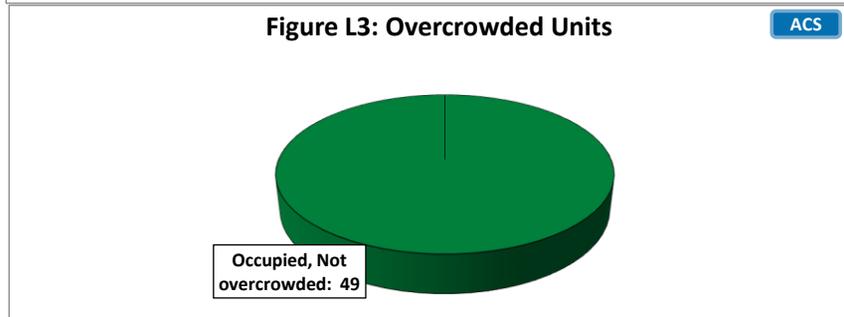
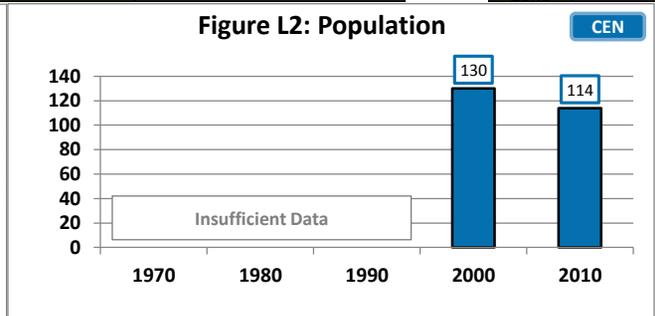
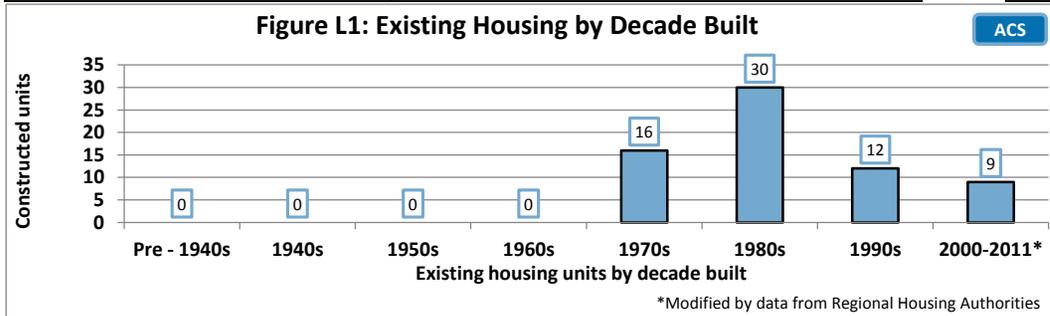
Housing Stock Estimates	Number of Units
All Housing	137
All Occupied Housing	6
All Vacant housing	131

Median Housing Costs		
	Monthly	Annual
All-occupied	NR	NR
Gross rent	NR	NR
Owner-occupied	NR	NR
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	NR	NR

Community Profile for: Silver Springs CDP

ANCSA Region: Ahtna Inc

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value
\$165,000

Owner-occupied House without a Mortgage, Median Value
\$156,300

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 87,679
Renter-occupied	\$ 105,625
Owner-occupied	\$ 72,500
w/ mortgage	\$ 64,167
w/o mortgage	\$ 88,125

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 917	\$ 11,004
Gross rent	\$ 1,063	\$ 12,756
Owner-occupied	\$ 789	\$ 9,468
Housing units w/ mortgage	\$ 1,333	\$ 15,996
Housing units w/out a mortgage	\$ 200	\$ 2,400

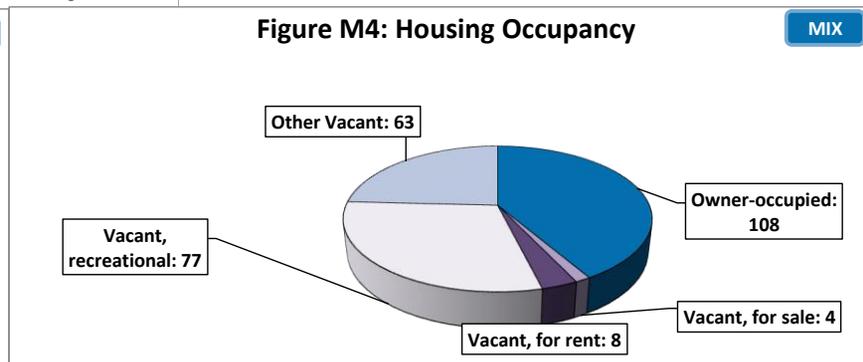
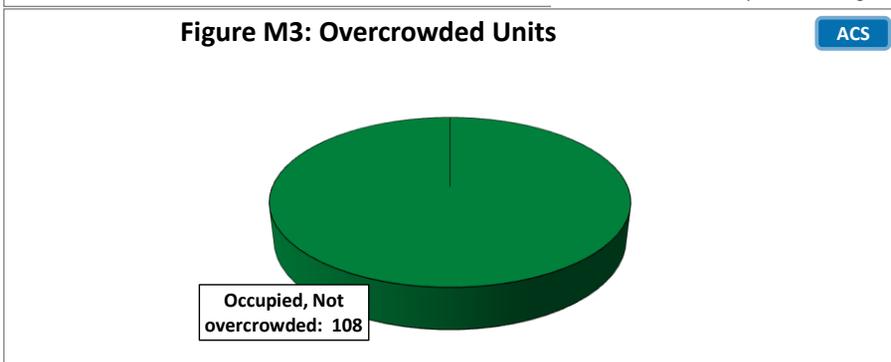
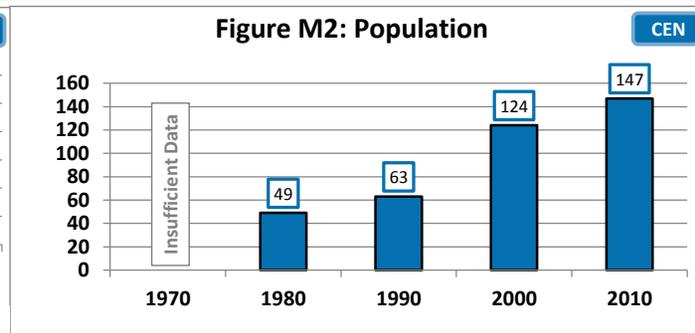
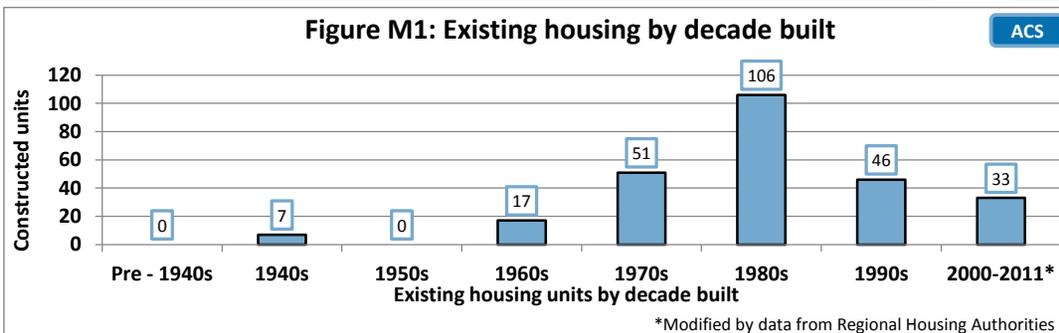
Housing Stock Estimates	
	Number of Units
All Housing	67
All Occupied Housing	49
All Vacant housing	18

Community Profile for: Slana CDP

ANCSA Region: Ahтна Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (13,534 HDD)



Slana CDP Housing Energy Characteristics

Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	9	3-star	71.5	1,869	\$ 5,042	252	139	\$2.99	8.4	60%
Retrofit units	3	3-star plus	74.1	1,541	\$ 4,371	221	147	\$2.89	8.9	100%
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR

Slana CDP Housing Envelope Characteristics

Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	9	7.1	23	15	NR	13	NR	NR	0.29	NR	0.55
Retrofit units	3	7.0	NR	NR	NR	NR	NR	NR	NR	NR	NR
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

MIX

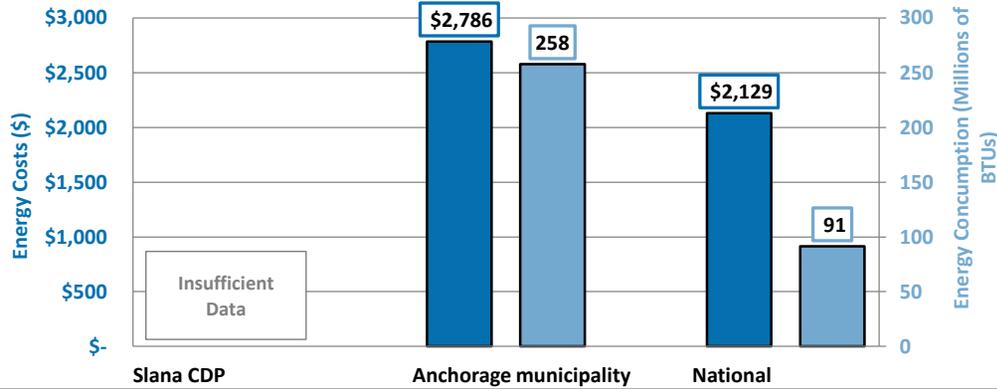
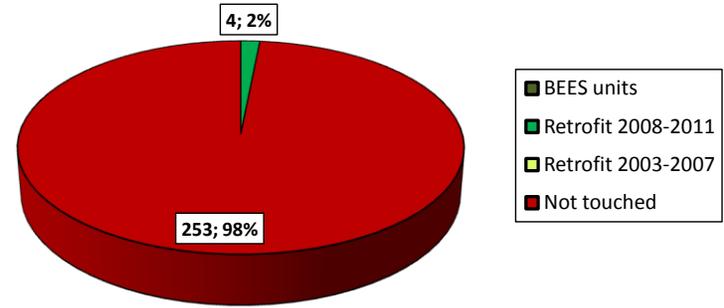


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Slana CDP

Owner occupied House with Mortgage, Median Value
NR

Owner-occupied House without a Mortgage, Median Value
\$120,800

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 28,542
Renter-occupied	NR
Owner-occupied	\$ 28,542
w/ mortgage	\$ 50,714
w/o mortgage	\$ 27,917

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 322	\$ 3,864
Gross rent	NR	NR
Owner-occupied	\$ 344	\$ 4,128
Housing units w/ mortgage	\$ 1,321	\$ 15,852
Housing units w/out a mortgage	\$ 187	\$ 2,244

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.06
Electricity with PCE (\$/kWh)	\$ 0.20
Electricity without PCE (\$/kWh)	\$ 0.70

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$7,803

Housing Stock Estimates	Number of Units
All Housing	260
All Occupied Housing	108
All Vacant housing	152
Vacant Housing for Sale/Rent	12

Avg % Income on Energy	27.3%
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Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

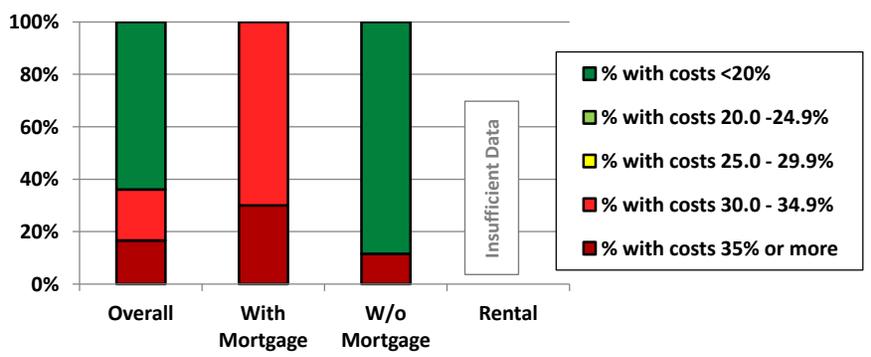
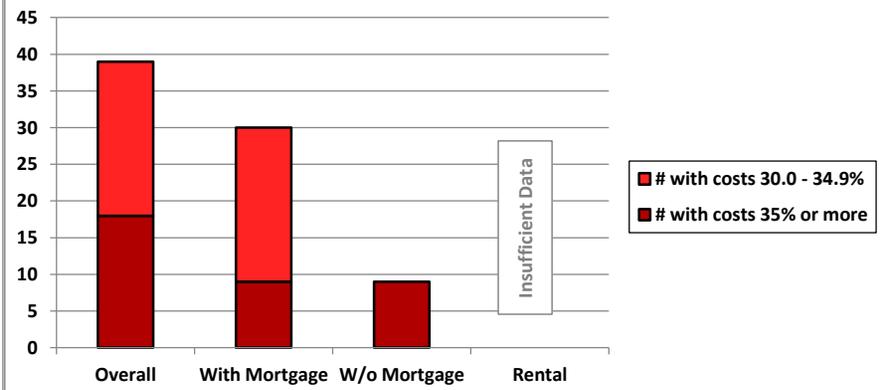


Figure M8: Number of Cost-Burdened Housing Units

ACS

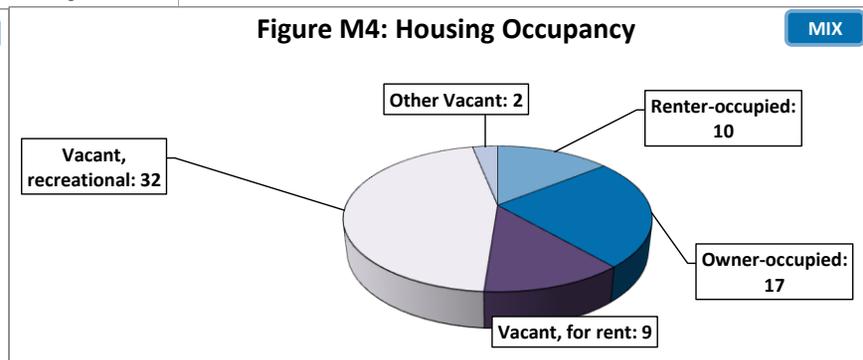
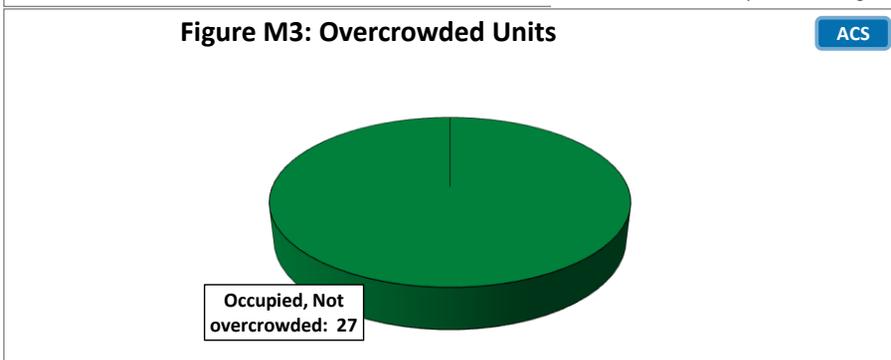
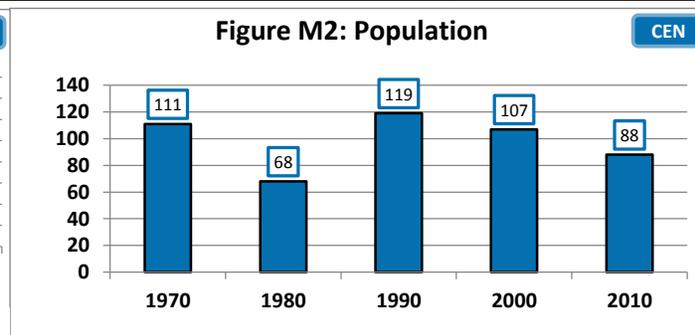
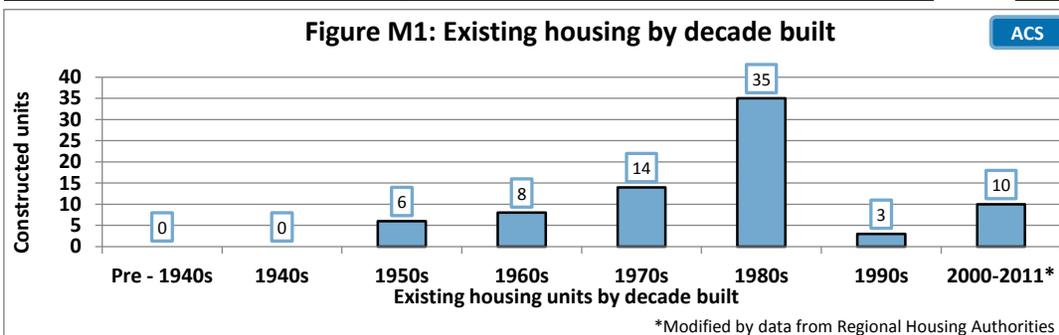


Community Profile for: Tatitlek CDP

ANCSA Region: Chugach Alaska Corp

Regional Housing Authority: North Pacific Rim Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (9,778 HDD)



Tatitlek CDP Housing Energy Characteristics

Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	0	NR	NR	NR	NR	NR	NR	NR	NR	NR
Retrofit units	0	NR	NR	NR	NR	NR	NR	NR	NR	NR
New construction	9	4-star plus	87.3	563	\$ 3,627	99	110	\$4.12	5.6	100%

Tatitlek CDP Housing Envelope Characteristics

Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Retrofit units	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
New construction	9	1.8	40	18	13	NR	NR	2	0.26	NR	0.34

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

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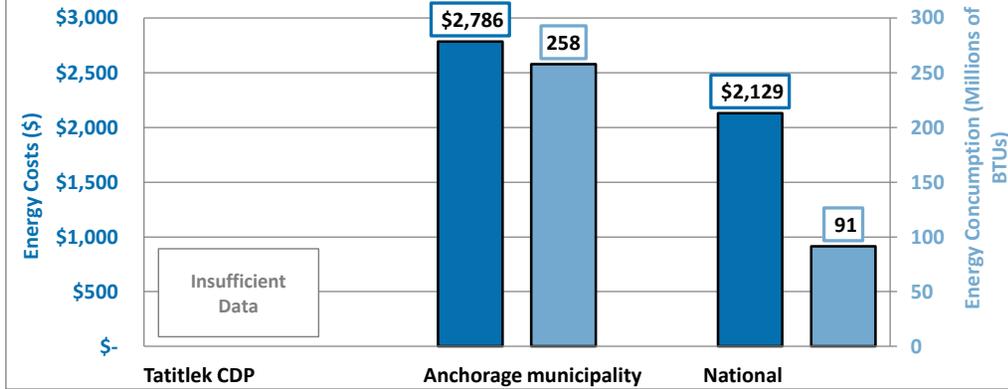
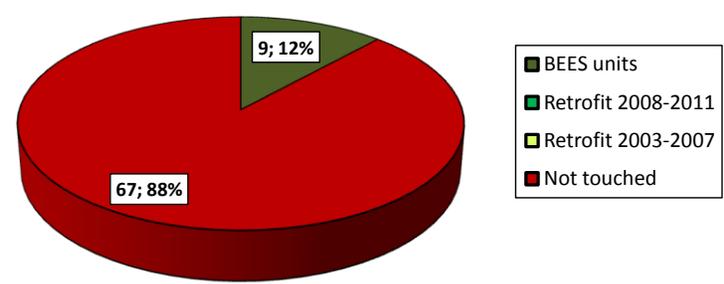


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Tatitlek CDP

Owner occupied House with Mortgage, Median Value
\$171,900
Owner-occupied House without a Mortgage, Median Value
\$83,300

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 28,295
Renter-occupied	\$ 29,063
Owner-occupied	\$ 19,583
w/ mortgage	\$ 27,917
w/o mortgage	\$ 6,667

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 280	\$ 3,360
Gross rent	\$ 281	\$ 3,372
Owner-occupied	\$ 275	\$ 3,300
Housing units w/ mortgage	\$ 317	\$ 3,804
Housing units w/out a mortgage	\$ 167	\$ 2,004

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.63
Electricity with PCE (\$/kWh)	\$ 0.18
Electricity without PCE (\$/kWh)	\$ 0.55

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$686

Housing Stock Estimates	Number of Units
All Housing	70
All Occupied Housing	27
All Vacant housing	43
Vacant Housing for Sale/Rent	9

Avg % Income on Energy	2.4%
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Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

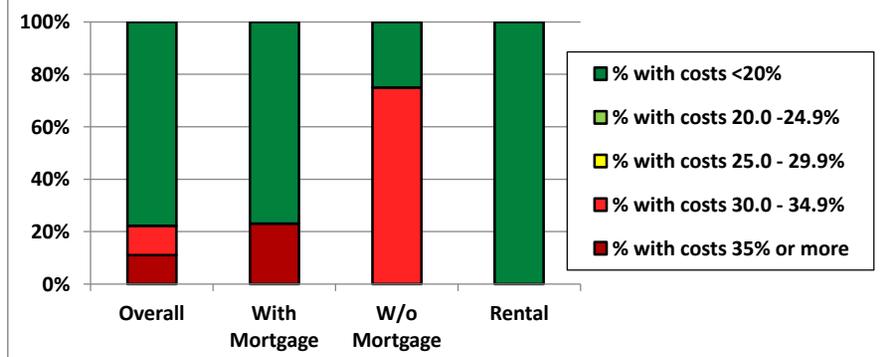
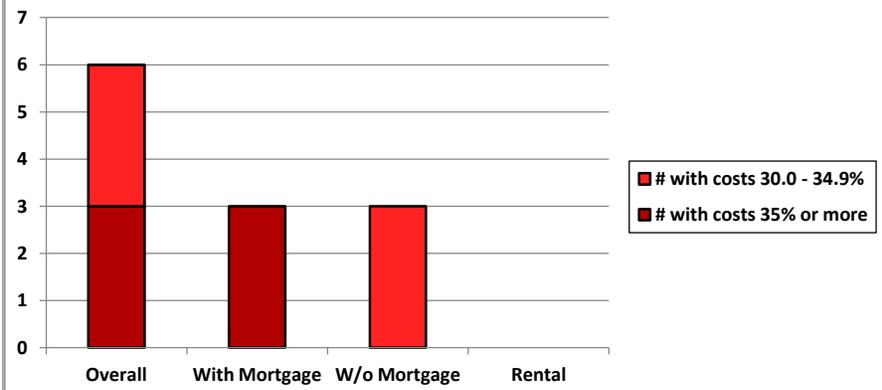


Figure M8: Number of Cost-Burdened Housing Units

ACS

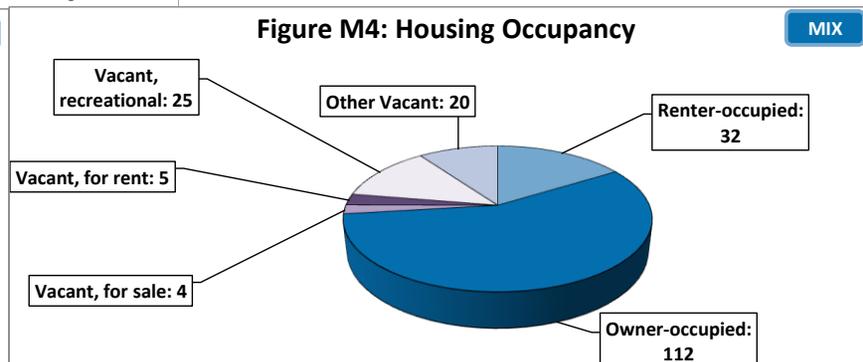
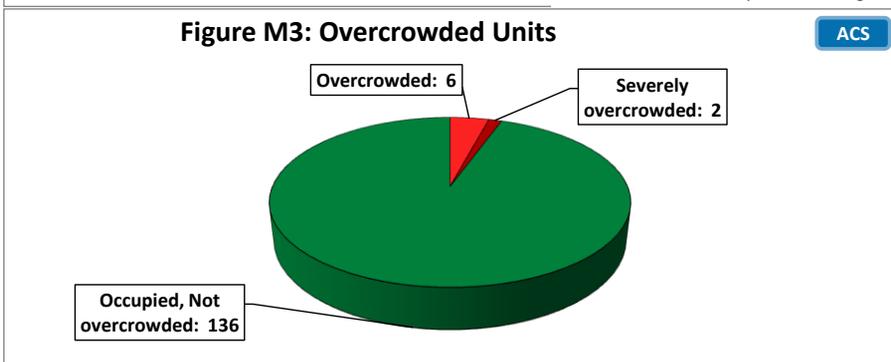
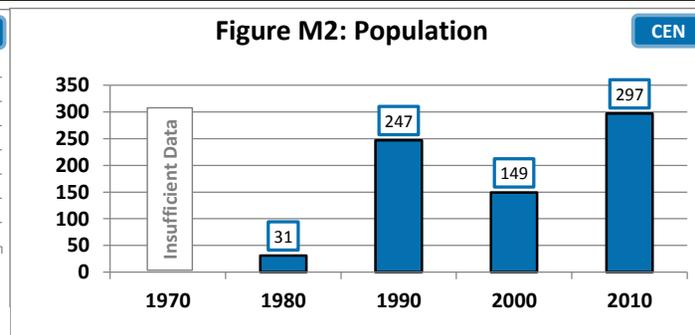
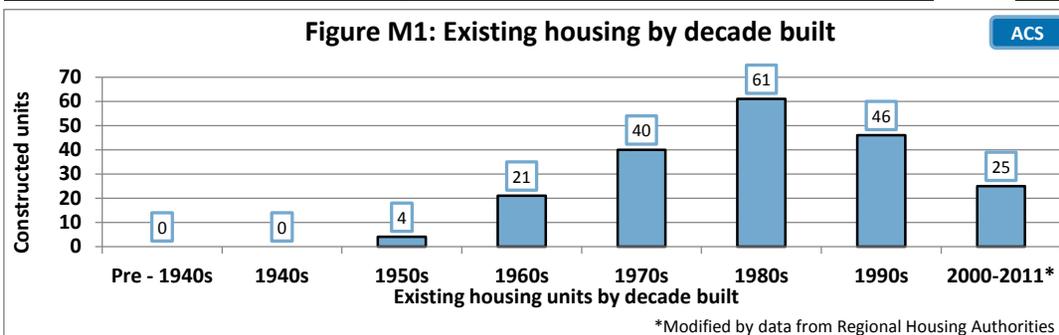


Community Profile for: Tazlina CDP

ANCSA Region: Ahтна Inc

Regional Housing Authority: Copper River Basin Regional Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (14,067 HDD)



Tazlina CDP Housing Energy Characteristics

Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	5	3-star	68.9	1,405	\$ 7,876	208	163	\$6.30	8.9	80%
Retrofit units	3	3-star	72.2	961	\$ 5,425	143	145	\$5.78	7.6	33%
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR

Tazlina CDP Housing Envelope Characteristics

Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	5	6.6	28	16	17	NR	2	2	0.33	NR	0.51
Retrofit units	3	6.9	39	16	NR	NR	NR	NR	0.32	NR	0.47
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure M5: Average Annual Home Energy Costs and Use

MIX

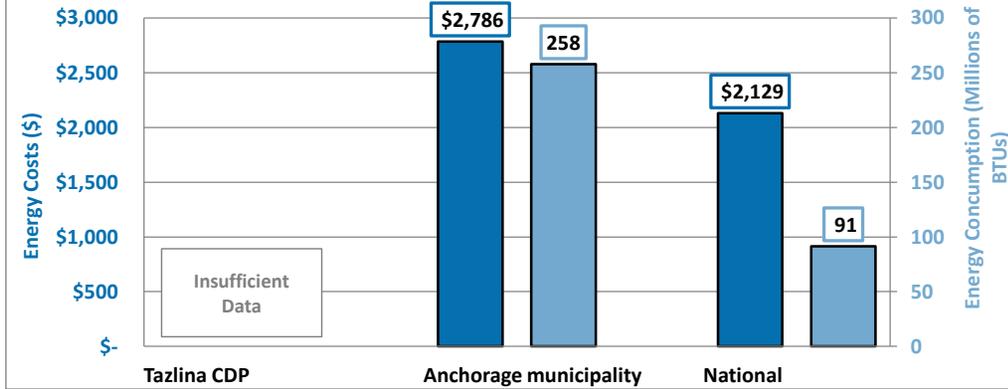
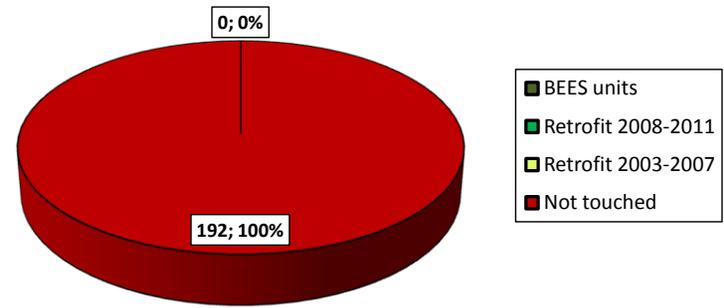


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Tazlina CDP

Owner occupied House with Mortgage, Median Value
\$202,800

Owner-occupied House without a Mortgage, Median Value
\$116,500

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.06
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.30

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 58,750
Renter-occupied	\$ 32,500
Owner-occupied	\$ 63,750
w/ mortgage	\$ 71,875
w/o mortgage	\$ 56,250

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$7,839

Avg % Income on Energy	13.3%
------------------------	--------------

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 433	\$ 5,196
Gross rent	\$ 344	\$ 4,128
Owner-occupied	\$ 470	\$ 5,640
Housing units w/ mortgage	\$ 1,273	\$ 15,276
Housing units w/out a mortgage	\$ 307	\$ 3,684

Housing Stock Estimates	Number of Units
All Housing	197
All Occupied Housing	144
All Vacant housing	53
Vacant Housing for Sale/Rent	9

Figure M7: Affordability - Housing Costs as a Percent of Income

ACS

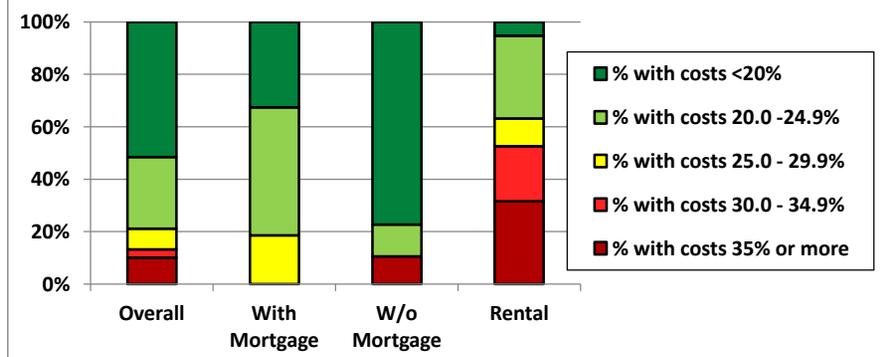
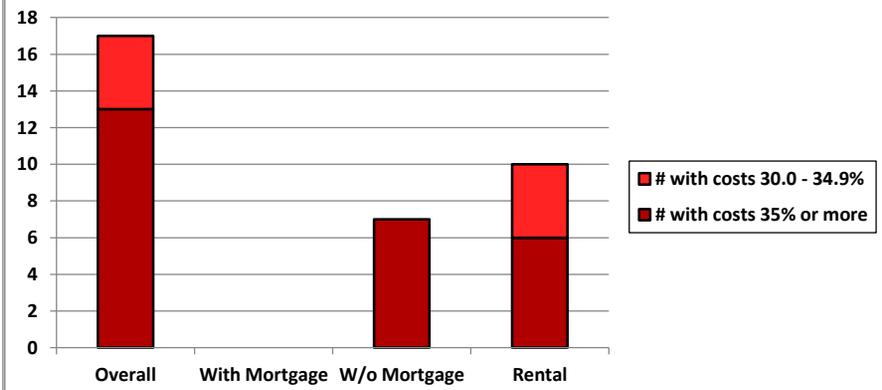
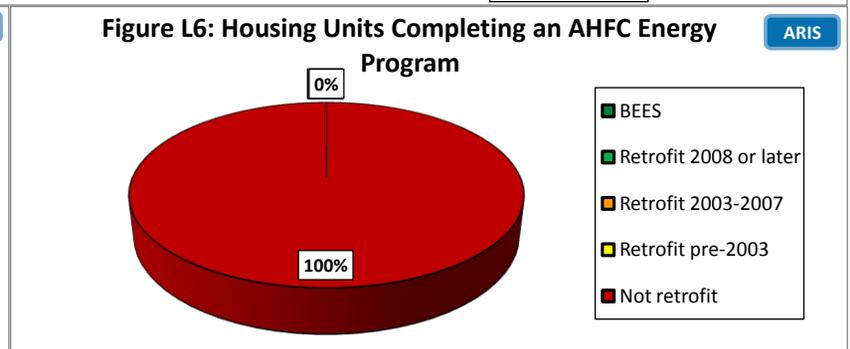
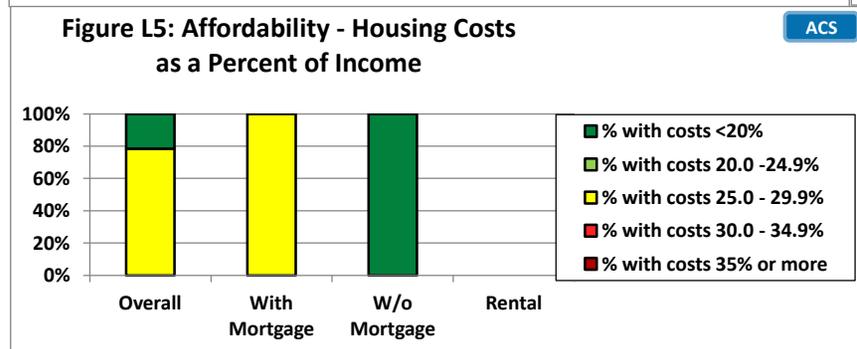
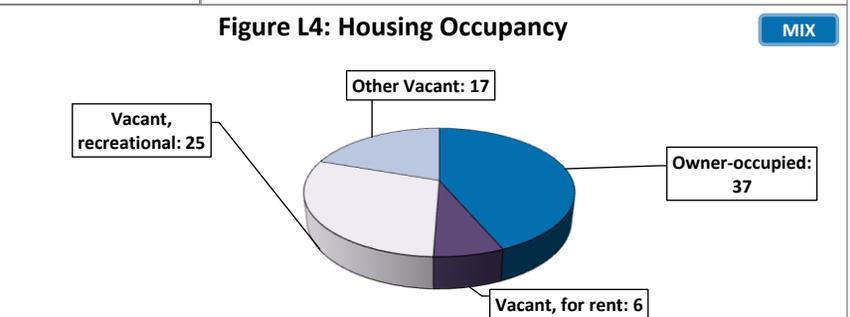
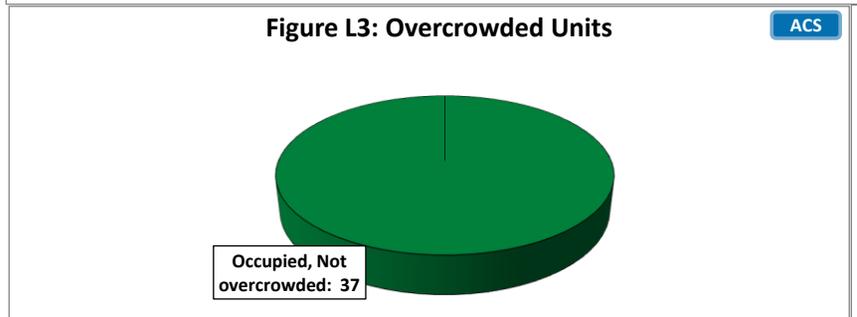
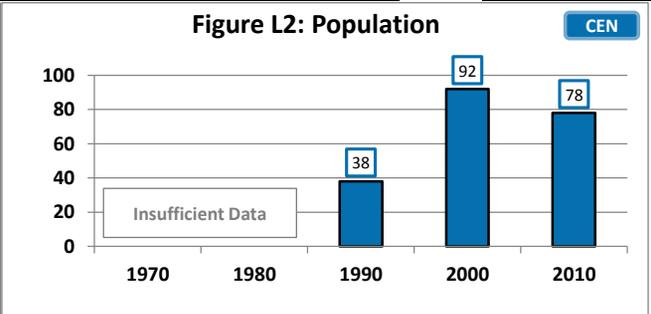
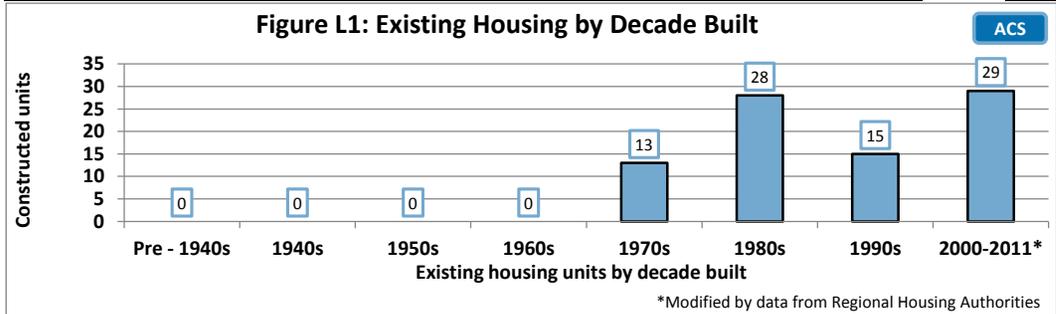


Figure M8: Number of Cost-Burdened Housing Units

ACS



Community Profile for:	Tonsina CDP	ANCSA Region	Ahtna Inc	Climate Zone	7
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Owner-occupied House with Mortgage, Median Value	NR
Owner-occupied House without a Mortgage, Median Value	NR

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 103,405
Renter-occupied	NR
Owner-occupied	\$ 103,405
w/ mortgage	NR
w/o mortgage	NR

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 2,181	\$ 26,172
Gross rent	NR	NR
Owner-occupied	\$ 2,181	\$ 26,172
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	NR	NR

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.20
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 1.00

Housing Stock Estimates	Number of Units
All Housing	85
All Occupied Housing	37
All Vacant housing	48

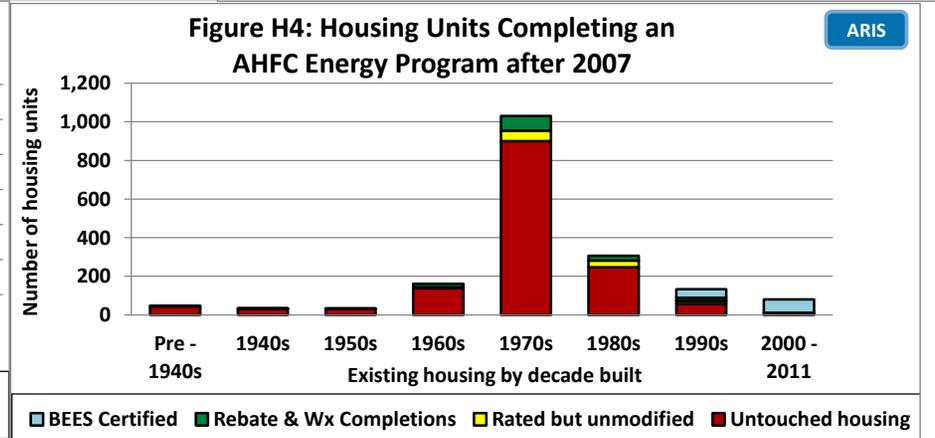
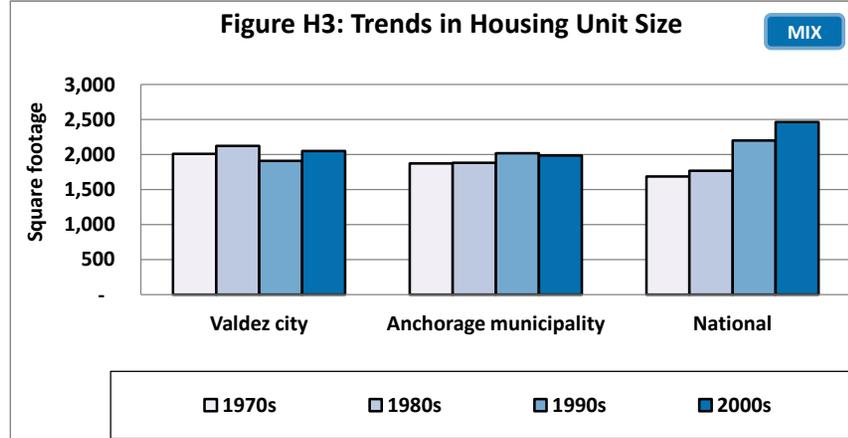
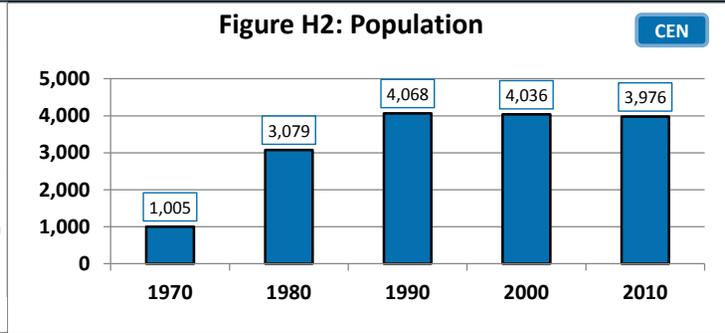
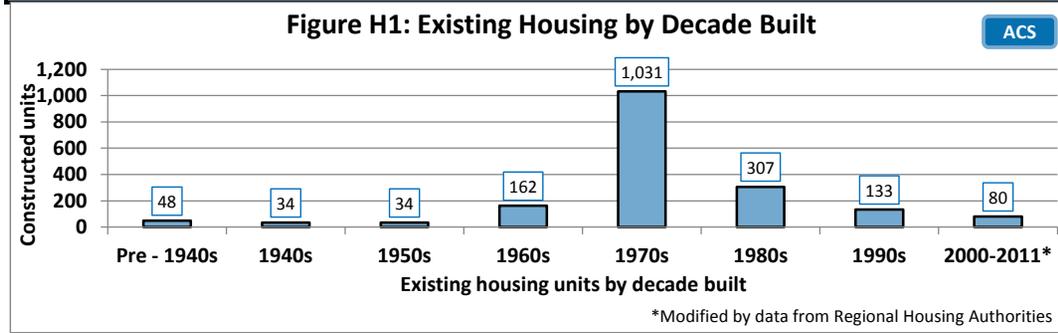
Community Profile for: Valdez city

ANCSA Region: Chugach Alaska Corp

Regional Housing Authority: North Pacific Rim Housing Authority

BEES Climate Zone (Heating Degree Days): Zone 7 (9,711 HDD)

COMMUNITY - Valdez city



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	36	2%
Lack complete kitchen	0	0%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$9,487

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	19
2003-2007	11
1990-2002	29

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	1,883,067	(gallons)
Nat Gas	-	(ccf)
Electricity	1,634,561	(kWh)
Wood	1,861	(cords)
Propane	145,515	(gallons)
Coal	20	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$4.30
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.29

Housing Stock Estimates	Number of Units
All Housing	1761
All Occupied Housing	1565
All Vacant housing	196
Vacant Housing for Sale or Rent	63

OVERCROWDING & VENTILATION - Valdez city

Figure H5: Overcrowded Units

ACS

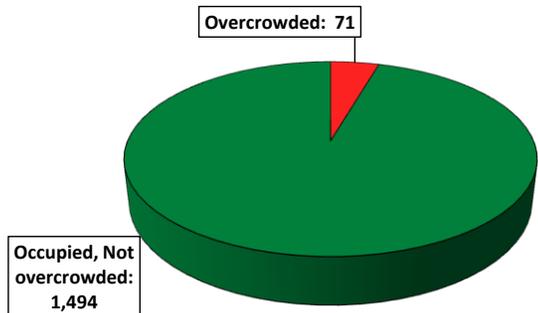


Figure H6: Housing Occupancy

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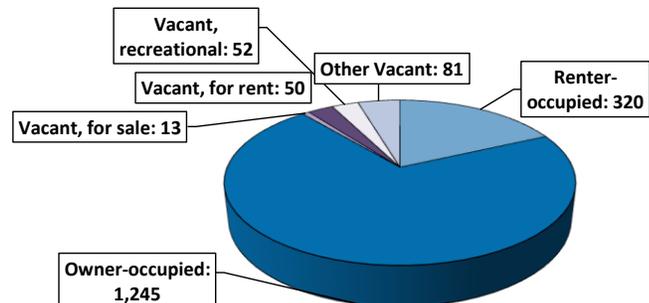


Figure H7: Average Air-Tightness of Current Homes by Decade Built

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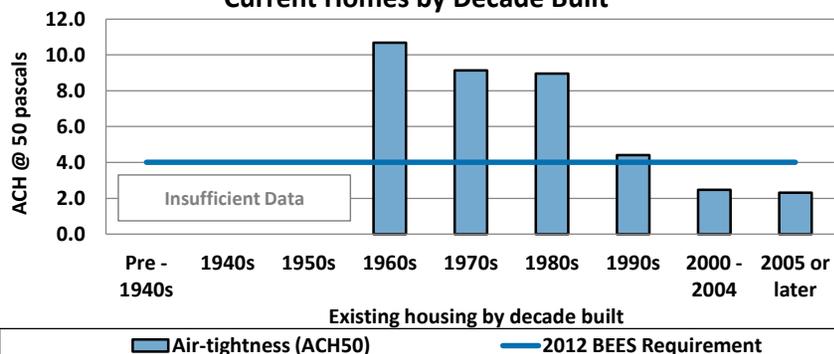


Figure H8: Existing Ventilation Type by Decade Built

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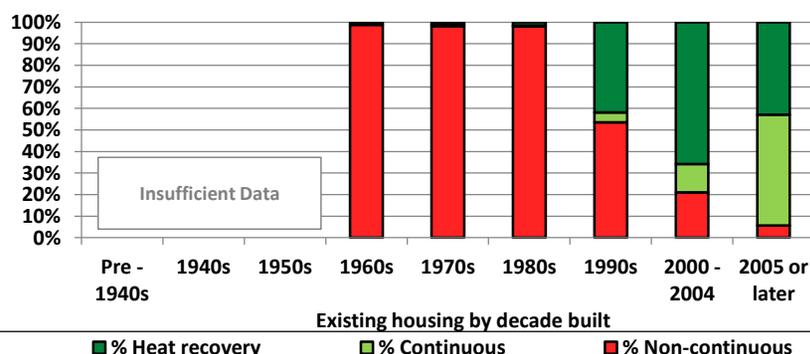


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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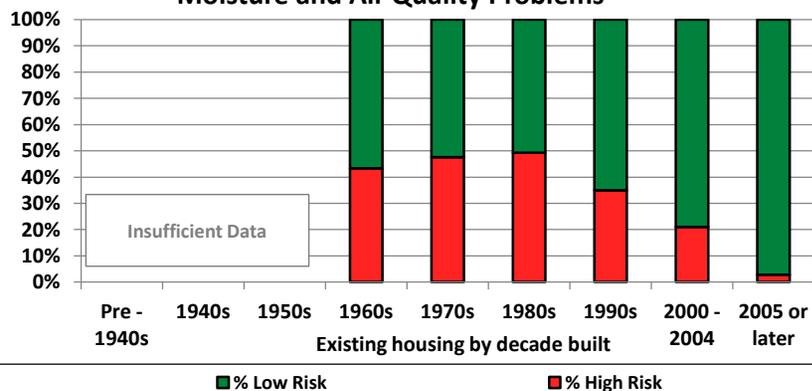
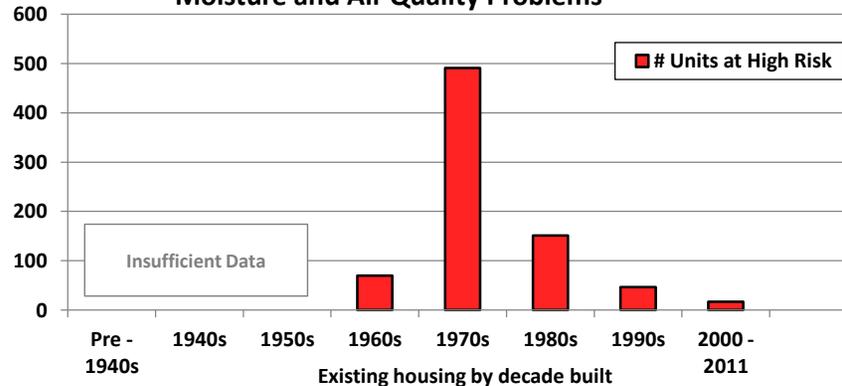


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Valdez city												
Current Valdez city Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtUs/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	504	2-star plus	66.3	1,975	\$ 9,487	257	187	34	30	135	\$ 5.04	10.5
Pre- 1940	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	40	2-star plus	62.8	1,668	\$ 9,407	258	193	35	30	161	\$ 5.84	12.8
1970- 79	194	2-star plus	63.7	2,012	\$ 9,855	270	204	35	30	144	\$ 5.35	11.5
1980- 89	84	3-star	69.1	2,123	\$ 9,796	266	199	36	31	134	\$ 4.92	10.6
1990- 99	92	4-star	82.7	1,911	\$ 7,260	183	82	21	19	95	\$ 3.93	6.4
2000- 2004	47	5-star	90.2	2,052	\$ 6,144	143	81	34	28	71	\$ 3.09	4.2
2005 or later	37	5-star	91.5	1,904	\$ 5,861	138	78	33	28	66	\$ 2.82	3.8

Figure H11: Current Average Energy Use Intensity and Average Square Footage by Decade Built

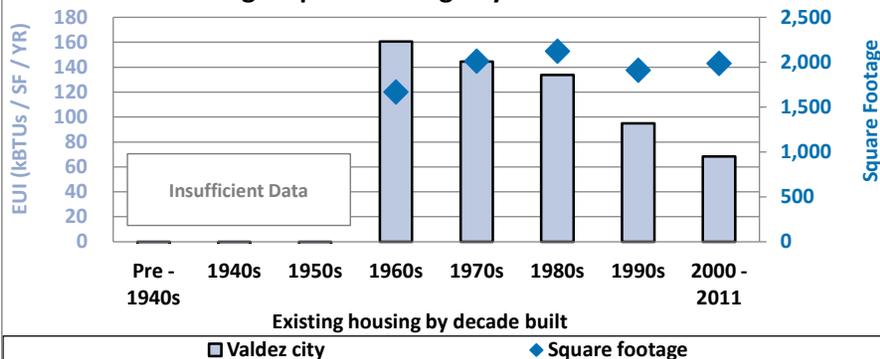
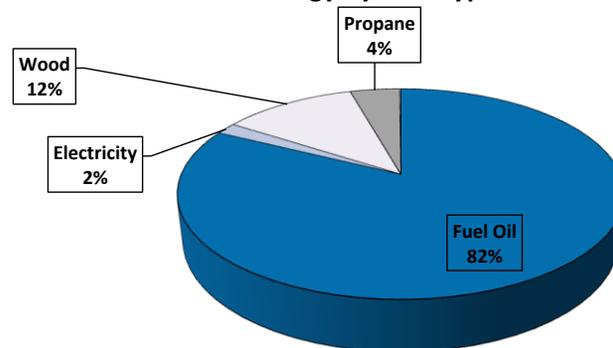


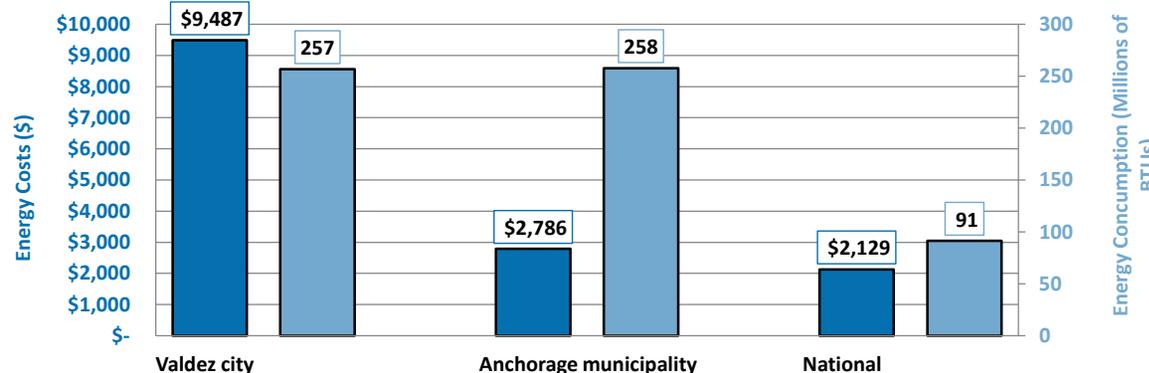
Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type



Current Valdez city Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	504	8.7	23	12	4	21	3	3	0.33	0.29	0.54
Pre- 1940	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	40	10.7	21	11	3	21	2	3	0.39	0.30	0.57
1970- 79	194	9.1	21	11	4	20	3	3	0.34	0.34	0.61
1980- 89	84	9.0	24	13	4	22	3	3	0.34	0.29	0.51
1990- 99	92	4.4	42	23	20	27	5	5	0.19	0.14	0.28
2000- 2004	47	2.5	42	18	19	28	3	3	0.22	0.18	0.32
2005 or later	37	2.3	48	18	20	33	4	4	0.23	0.16	0.31
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Valdez city

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.4
Owner-occupied	2.5
renter-occupied	1.9

Owner-occupied House with Mortgage, Median Value
\$171,900

Owner-occupied House without a Mortgage, Median Value
\$101,000

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 73,068
Renter-occupied	\$ 41,223
Owner-occupied	\$ 89,650
w/ mortgage	\$ 101,890
w/o mortgage	\$ 57,059

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 955	\$ 11,460
Gross rent	\$ 1,103	\$ 13,236
Owner-occupied	\$ 929	\$ 11,148
Housing units w/ mortgage	\$ 1,444	\$ 17,328
Housing units w/out a mortgage	\$ 528	\$ 6,336

Avg % of Median Income Spent on Energy	13.0%
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Figure H14: Affordability - Housing Costs as a Percent of Income

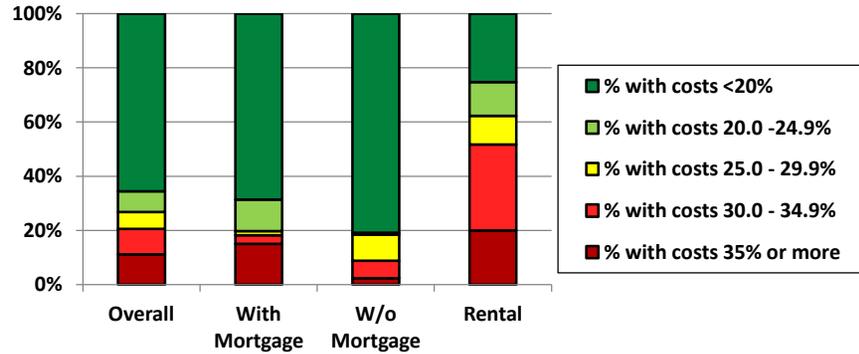


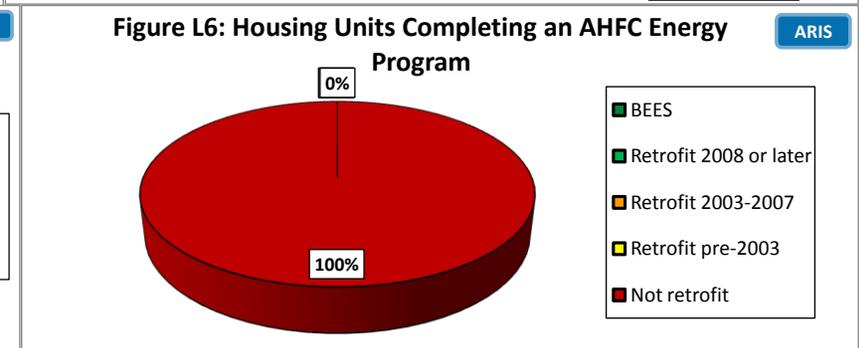
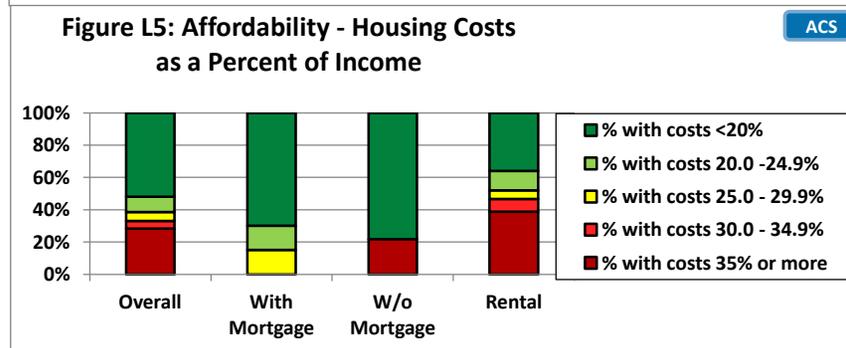
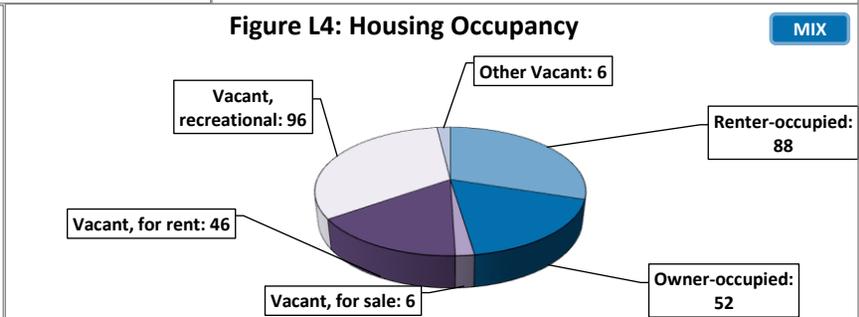
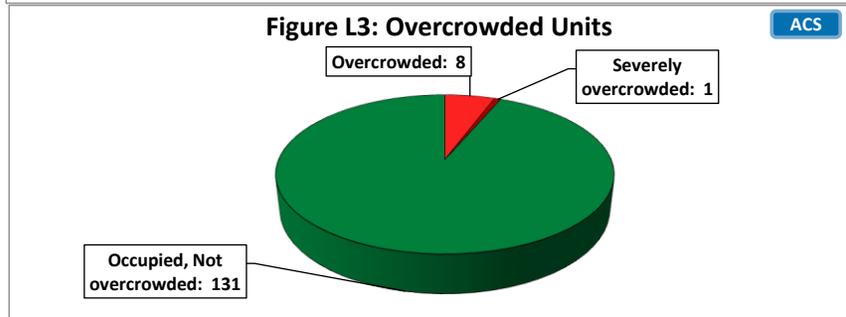
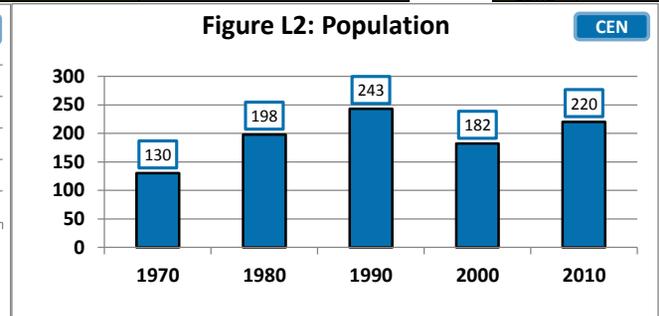
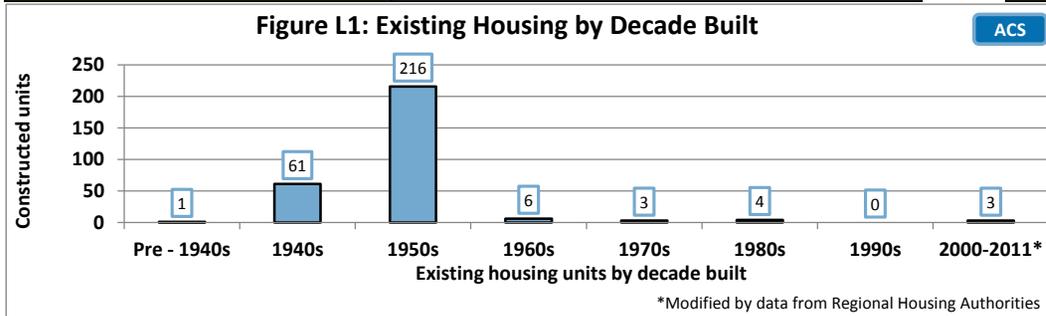
Figure H15: Number of Cost-Burdened Housing Units



Community Profile for: Whittier city

ANCSA Region: Chugach Alaska Corp

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value
\$75,000

Owner-occupied House without a Mortgage, Median Value
\$44,800

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 46,250
Renter-occupied	\$ 31,071
Owner-occupied w/ mortgage	\$ 53,929
Owner-occupied w/o mortgage	\$ 81,250

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 681	\$ 8,172
Gross rent	\$ 688	\$ 8,256
Owner-occupied	\$ 667	\$ 8,004
Housing units w/ mortgage	\$ 870	\$ 10,440
Housing units w/out a mortgage	\$ 575	\$ 6,900

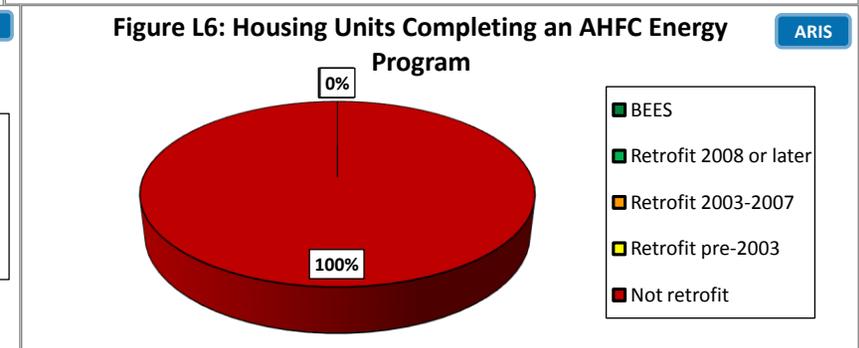
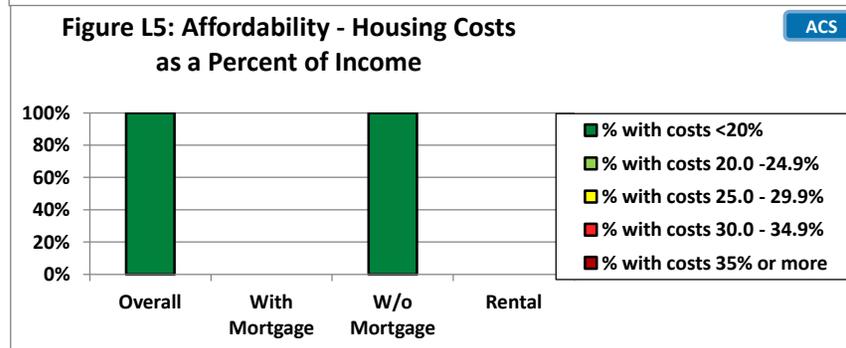
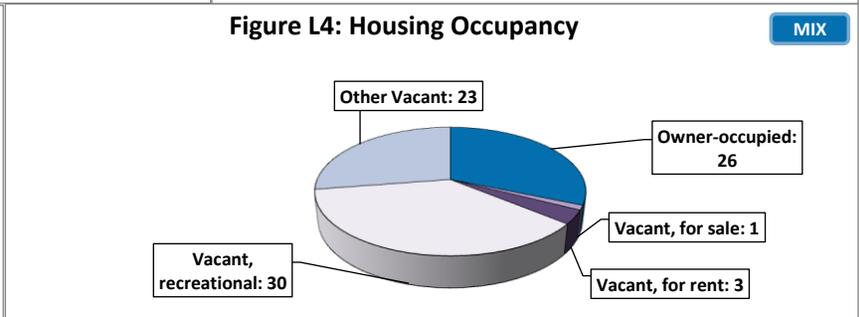
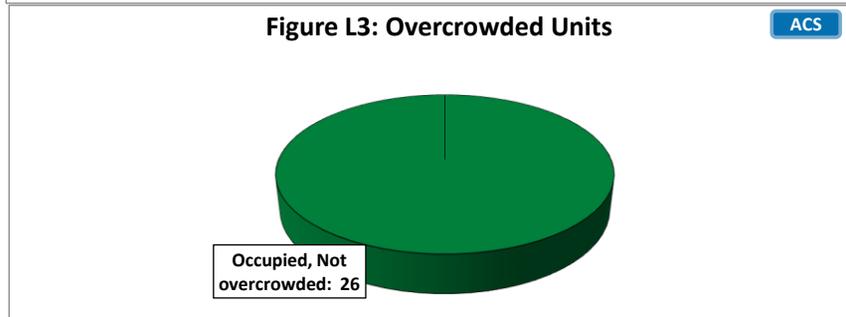
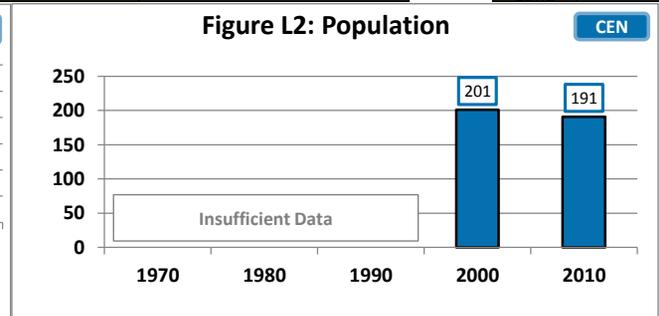
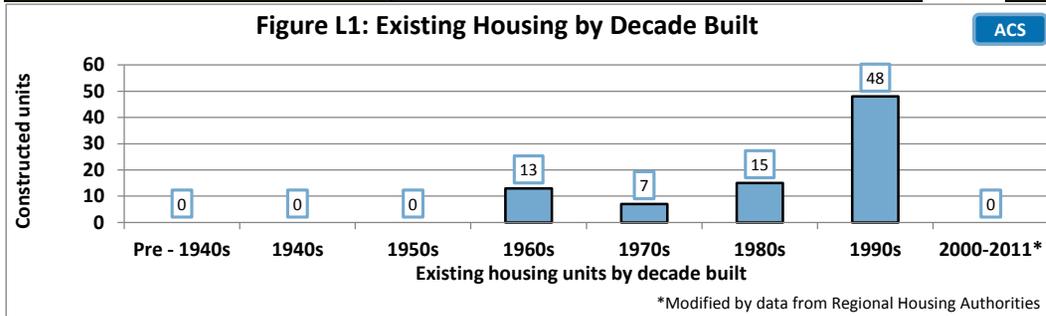
Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 3.99
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 1.00

Housing Stock Estimates	Number of Units
All Housing	294
All Occupied Housing	140
All Vacant housing	154

Community Profile for: Willow Creek CDP

ANCSA Region: Ahtna Inc

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value
NR

Owner-occupied House without a Mortgage, Median Value
\$405,000

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 17,500
Renter-occupied	NR
Owner-occupied	\$ 17,500
w/ mortgage	NR
w/o mortgage	\$ 17,500

Housing Stock Estimates	
Housing Stock Estimates	Number of Units
All Housing	83
All Occupied Housing	26
All Vacant housing	57

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 175	\$ 2,100
Gross rent	NR	NR
Owner-occupied	\$ 200	\$ 2,400
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	\$ 175	\$ 2,100